Building Services News

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Article 1

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BS News September/October

September/October 2015

Building Services news

INDUSTRY TO FEEL IMPACT OF ErP DIRECTIVE

■ Commercial Boilers

■ Postcard from Abroad

■ CIBSE Golf at Castleknock

■ Another Side of ...

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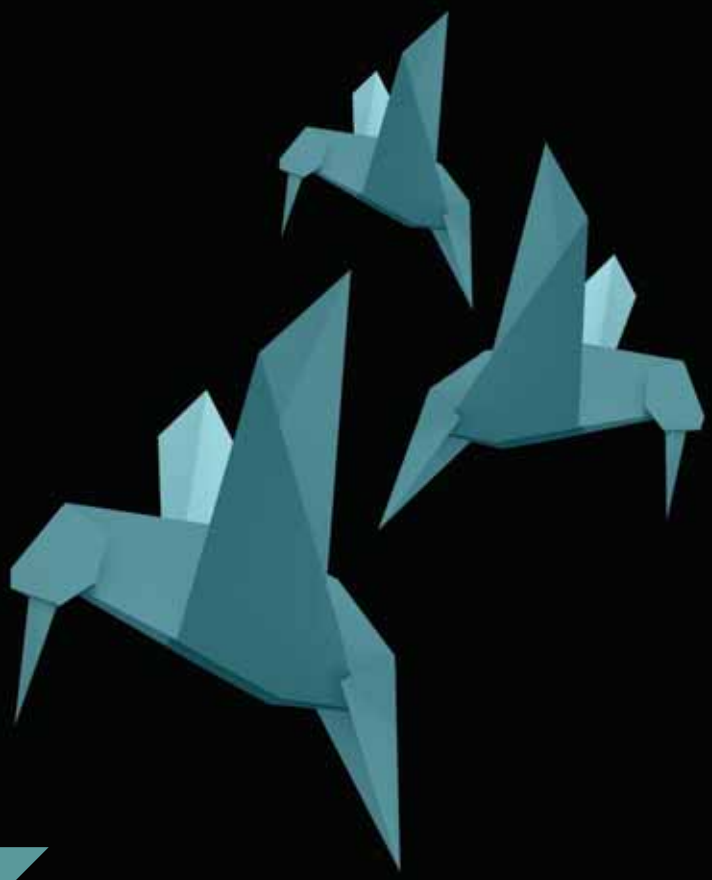

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Inspire the Next

ErP not an imposition but an opportunity

The implementation of Lot 1 and Lot 2 of the ErP Directive relating to heating appliances on 26 September last has serious implications for both product suppliers and heating installers. While some will regard it as yet another unwelcome tier of bureaucratic form-filling, it is in fact an opportunity that will lead to better, more profitable business.

It will make for a level playing field when the various products in the marketplace are being assessed and compared, and provide installers with a transparent and clear-cut mechanism when presenting options to their clients.

Both manufacturers and installers have obligations under this latest phase of the ErP Directrive and virtually all product suppliers are already compliant.

On first reading the obligations on installers appear more onerous in that they relate to certification of the entire heating system. However, again the manufacturers have shown leadership by devising mechanisms and tools that installers can freely access to help them honour their commitments.

See inside to learn how you can ensure ErP compliance.

Building Services news

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PEARL FOR EURO GAS 39

To celebrate 30 years in business, Euro Gas recently hosted a wonderful celebratory evening on board the *MV Cill Airne* on the Liffey.

29 CIBSE GOLF AT CASTLEKNOCK

The annual CIBSE golf outing held at Castleknock Golf Club recently demonstrated once again the all-industry nature of the event.

NEWS AND PRODUCTS

SEAI smart technology competition

SEAI, in co-operation with Enterprise Ireland, has called on innovative companies to develop smart technology solutions to help make Building Energy Ratings (BER) more informative for homeowners. Funding of up to €150,000 is available under the competition which is called Small Business Innovation Research.

Smart solutions, such as advanced mobile technology, can help make BERs a more influential factor in property purchase, rental decisions and also better inform home upgrade opportunities.

With almost 600,000 BERs already published, there is a wealth of useful data available to make BER a really powerful tool for all prospective homeowners and renters.

Solutions anticipated under this new competition are expected to go well beyond the current BER certificate and advisory report and should include recommendations for clever use of mobile technology in influencing consumer behaviour. Solutions may relate to single home BERs and/or comparators to national datasets.

Full details on the call are available on eTenders http://bit.ly/1QCz3LH

O'Brien appointed Hitachi Technical Manager

Martin O'Brien, previously Applications/Technical Support Engineer at Hitachi Ireland, has now been appointed Technical Manager of the company.

Martin has 15 years experience within the building services sector, the last eight of those being with Hitachi Ireland. Throughout that time he has held various roles, gaining invaluable expertise in everything from VRF through to air-to-water heat pumps and the commissioning of chillers.

He delivers many of Hitachi Ireland's training and CPD courses, and ensures that his knowledge and awareness of the latest innovations and technological developments is kept up to date by regular visits to Hitachi's facilities in both the UK and Barcelona.

Contact: Martin O'Brien, Technical Manager, Hitachi Ireland. Tel: 087 – 914 9703; email: martin.obrien@hitachi-eu.com

Grundsfos iSolutions Roadshow

Experience indicates that two thirds of all pumps installed today are inefficient and use up to 60% too much energy. For Grundfos, energy optimisation through an intelligent system approach is the way forward to create greater energy efficiency. Against that background it has developed Grundfos iSolutions which can lead to significant savings.

To explain iSolutions, Grundfos is hosting a series of nationwide exhibitions at which it will demonstrate the iSolutions concept and explore how modern products and system optimisation can save energy in existing systems or future projects.

The exhibitions feature working models where, together with Grundfos engineers, visitors will be able to explore how the unique functionality of these advanced products can deliver energy savings. It is also possible to arrange a site-specific pump survey or pump audit.

To visit Grundfos iSolutions at a location near you register your interest by emailing infoireland@grundfos.com

Fallon Joins C&F Quadrant

C&F Quadrant has strengthened its commercial heating team with the recent appointment of David Fallon, who will be responsible for developing new business in the Dublin and Leinster region. David has a number of years experience, both in the UK and Ireland, with all stakeholders in the building services industry. He can be contacted directly at Tel: 087 – 953 9240 or david@cfquadrant.ie

Joe Triumphs at Captain's Day

There was an outstanding turnout for the BTU Captain's Day in Luttrellstown Castle Golf & Country Club recently with the prestigious venue befitting the occasion. The course was in excellent condition and the weather ideal. Consequently, scoring was very high with a count-back required in many instances to determine best scores.

There was also a unique situation in the nearest-the-hole competition where a number of balls could not be separated. Multiple prizes were awarded to Sean Byrne, John White and Steve Jones.

Brendan Coghlan of sponsors BSS put up an excellent array of prizes while Captain Seamus Kiernan nailed his colours very firmly to the mast by planting a Dublin flag on every table at the meal. Great also to see his dad, Shay, present. Prize winners were as follows.

Overall winner: Joe Warren, 38pts, Back 9. **Class 1 –** First: Mick Matthews, 35pts; Second: Robert Kenny, 33pts; Third: Ger Hutchinson, 32pts. **Class 2 –** First: Gerry Tobin, 38pts; Second: Mick Clancy, 36pts (Back 9); Third: Seamus Kiernan, 36pts. **Class 3 –** First: Brendan Coghlan, 32pts; Second: Michael Murphy, 31pts (Back 9); Third: Brendan Bracken, 31pts. **Front Nine:** David Daly. **Back Nine:** Dermot Ryan. **Nearest the pin:** Sean Boyle/John White/Steve Jones. **Longest Drive:** Sean Byrne. **Visitor's Prize:** Stephen Rafter, 38pts.

Overall winner Joe Warren flanked by BTU Captain Seamus Kiernan (left) and Brendan Coghlan from sponsors BSS.

Talk to the experts ...

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NEWS AND PRODUCTS

Mitsubishi Electric wins RAC Cooling Awards 2015

Mitsubishi Electric has won two awards at the RAC Cooling Awards 2015 ceremony held in London recently. The Mitsubishi Electric Ecodan FTC5 range of air source heat pumps came first in the "Heat Pump Product of the Year" category while its City Multi YLM VRF System took the top place in the category "Air Conditioning or Heat Pump Innovation of the Year".

The City Multi YLM VRF System utilises a world-first flat-tube aluminium micro-channel heat exchanger that has been designed for optimal performance in the Irish climate. It is also flexible, especially where EN378 restrictions are in place, while offering improved performance and higher heat transfer.

The Ecodan FTC5 range of air source heat pumps is a simple, renewable alternative to traditional heating systems that is suitable for everything from a small domestic to a large application. All FTC5 systems come with energy monitoring as standard and full remote control of the system features is available anywhere in the world with MELCloud, Mitsubishi Electric's cloud based solution for remotely controlling the Ecodan systems via tablet, smartphone, PC or Mac.

Photo shows Mitsubishi Electric's City Multi YLM which won the Innovation Category in the recent RAC Awards.

Stafford appointed Hevac Director

Polytherm Heating Systems Ltd has appointed Donal Stafford to its Board as Sales Director. Donal has over 14 years' experience in the HVAC Industry, initially joining Polytherm in 2001 before leaving in 2009 to take up another role.

However, he recently rejoined Polytherm as General Manager, bringing a wealth of experience and technical know-how. This new appointment is a natural extension of Donal's career to date and affirms Polytherm's commitment to invest in high-quality people to drive positive change and constant improvement in its "system" offering.

OFTEC calls for responsibility

OFTEC has called on boiler manufacturers to use only seasonal efficiency data that is available on the Home-heating Appliance Register of Performance (HARP) database when quoting boiler efficiencies.

David Blevings, OFTEC Ireland said: "We believe it's in the best interests of consumers and the industry that all manufacturers and energy companies behave responsibly. It is vital that manufacturers in particular use the agreed seasonal efficiency data when quoting their boiler efficiencies. This ensures the householder is getting the correct information, allowing them to make comparisons and informed decisions.

Paul Martin, Programme Manager, Technical Standards Development, SEAI added: "Consumers rely on accurate information and like-for-like comparisons to help inform their purchases. We would therefore prefer to see manufacturers using only efficiency levels quoted on the HARP or SEDBUK databases to maintain consistency across the industry."

Lawlor appointed Toshiba Sales Manager for Ireland

Toshiba has appointed Ken Lawlor as Sales Manager for Ireland to spearhead further market penetration and growth of the brand. With a brief to develop both the distribution and direct sales channel, Ken will work closely with long-established Toshiba distributor GT Phelan.

The company is targeting growth in Ireland across its range of class-leading split systems, high performance VRF air conditioning and air-to-air and air-to-water heat pumps.

David Dunn, General Manager of Toshiba Air Conditioning, said: "Ireland is important to us and we are investing significantly to develop our presence and to support our growing customer base. This means increasing our support for the distributor channel as well as developing a component of direct sales.

"We are proud of the brand strength of Toshiba in Ireland as a result of the outstanding work by GT Phelan over many years. We look forward to building on our successful partnership, and working to maximise the opportunities presented for the benefit of all concerned."

NEWS AND PRODUCTS

McConn misses out ... again!

Shane McConn of RMI had the unfortunate experience of missing out yet again on winning a luxury car at the recent Hevac annual golf outing. Held at Beech Park Golf Club, the hole-in-one competition was on the 12th hole where his ball all but sat on the lip of the hole (last year he was within 12 inches). With a luxury Mercedes Benz as the prize, he was understandably upset.

That said, the day was an excellent occasion with 54 people playing golf and a total of 100 people sitting down for the meal and presentation of prizes later that evening in the City West Hotel.

Comedian Alan Shortt was the compere throughout while the charity raffle raised close to €1000 for the Oncology Department of St James Hospital in Dublin. Results were as follows:

Overall Winner: Pat Quinn, 37pts;
Best Front: Gary Keeling; Best Back: John Littlefield.

Team Winners
First: Denis Murphy, Stephen Christy and Mano Bahktiari, 81pts;
Second: Shane McConn, Martin Finnegan and Ruben Keogh, 81pts;
Third: Brian Quill, Eamon Quill and Dean Maxwel, 77pts.

Class 1
First: Martin Finnegan, 34pts; Second: Dermot Fennelly, 31pts;
Third: Andrew Sargent, 31pts.

Class 2
First: Denis Murphy, 36pts; Second: Richard Ballard, 35pts;
Third: Francis O'Dwyer, 34pts.

Class 3
First: Mano Bahktiari, 32pts; Second: Eamon Quill, 32pts;
Third: Jonathan Weller

Longest Drive: Dermot Fennelly; **Nearest the Pin:** Fabrice Robatherm; **Staff prizes:** Sean Ahern and Barry Naughton.

Pat Quinn of Quinn Downes, winner of the Conex Perpetual Cup at the Hevac Annual Golf Day, receiving his prize from Mano Bahktiari of Conex and Seamus English of Hevac. Inset: Shane McConn bemoaning the Merc that got away.

NEWS AND PRODUCTS

Baxi Potterton Myson to promote Toshiba Estia with GT Phelan

GT Phelan, Toshiba's longest-serving distributor in Europe, has signed a cooperation agreement with Baxi Potterton Myson to promote and distribute Estia air to water heat pump systems through its regional network in Ireland. Comprising standard hot water and high-temperature (60°C) versions, Estia is available in three models offering outputs between 9kw and 14kW.

Baxi Potterton Myson has been supplying heating products and services to the Irish market for over 40 years and this new partnership with GT Phelan means it can now supply air-to-water solutions through its nationwide dealer network.

Vincent Broderick, Sales Director with Baxi Potterton Myson, says: "We are excited to have added this credible and reliable brand to complement our core product ranges. We have been offering products and services to the market for over 40 years and pride ourselves on bringing innovative products such as the new Toshiba Estia range to the Irish heating market.

"Toshiba has always been associated with quality and reliability but these two important attributes would mean nothing without the support of a professional distributor. We are therefore delighted to be associated with GT Phelan".

Derek Phelan, GT Phelan comments: "This association between two well-established companies will result in the Toshiba brand being more widely promoted to provide efficient heating to the domestic market. We are pleased to be associated with Baxi Potterton Myson in this endeavour".

GT Phelan has already provided Baxi Potterton Myson with sales and technical training and now, Damian Delaney, Baxi Potterton Myson's Technical Support Manager, will deliver this programme to the company's dealer network in conjunction with GT Phelan.

GT Phelan has also installed a fully-operational Toshiba training rig for use in Baxi Potterton Myson's training facility in Dublin 12. This allows engineers to see exactly how Estia delivers heat into a variety of applications, including underfloor heating, convectors and radiators.

Vincent Broderick, Sales Director, Baxi Potterton Myson with Damian Delaney, Technical Support Manager, Baxi Potterton Myson and Derek Phelan, Sales & Marketing Director, GT Phelan.

Neil Maher joins Mitsubishi Electric

Mitsubishi Electric Ireland has appointed Neil Maher as Marketing Executive for the Air-Conditioning and Heating Division for the Irish branch. Neil is new to the industry, coming from a recent background in European Union education and training programme funding. "I am delighted to join Mitsubishi Electric at an exciting time of growth and development and I'm looking forward to contributing to Mitsubishi Electric's market-leading position". Neil spent two years living and working in Japan following his graduation with a BSc in Management and Marketing to which he recently added an MSc in Strategic Management.

Eurofluid goes live

Design engineers and mechanical contractors can now find insights into common industry misperceptions, with the latest exciting and unique innovations for heating and hot water systems featured on Eurofulid's new interactive website.

These include the new Europak Pastormaster Legionella Eradication and DHW generation unit, the new ACV Prestige wall-hung stainless steel boiler range, and the new ADISA stainless steel condensing boiler range which is the most compact on the market.

Log on to www.euro-fluid.com for full details.

Fujitsu helps Fujitsu!

Fujitsu Air Conditioners in the UK is helping its sister organisation, Fujitsu Ireland, maintain the perfect temperature, with the complete replacement of its ageing air conditioning system with state-of-the-art Fujitsu VR-II three-pipe VRF systems.

The large project at Fujitsu Ireland's IT Services head office involved the installation of seven 45kW, two 40kW and one 33.5kW outdoor units across the two floors and three wings of the Fujitsu Ireland offices at Swords, Co Dublin. These, the indoor ducted systems and a DX split system in the IT room, were all installed by Dublin-based contractor Crossflow, through facilities management company Mitie.

The new Fujitsu system replaced an old one based on the no-longer available R22 refrigerant in a mixture of open-plan areas, small offices and meeting rooms. The IT room was kept on a separate system as it required almost constant cooling.

All the systems are controlled via Fujitsu's PC-based System Controller, allowing remote access for energy management, scheduling and fault fighting.

Fujitsu Ireland's IT Services Head Office

Crossflow Director Padraig Hanvey commented: "There were a number of challenges with the installation, not least that it was a working building, so most of the installation had to be done at night. However, thanks largely to Fujitsu's people and its equipment, it all went extremely smoothly.

Padraig Hanvey, Director, Crossflow with Christopher Dymond, Fujitsu Services Internal Project Manager; Ian Carroll, Sales & Marketing Director and Martyn Ives, Technical Manager, Fujitsu Air Conditioners.

Reception at Fujitsu's IT Services Head Office

"While Fujitsu systems were obviously specified by the end user and we had never installed them before, we certainly will again.

"Because we weren't familiar with the equipment we received a great deal of help from Fujitsu's Technical Manager, Martyn Ives, and our engineers were sent for free specialist training at Fujitsu Air Conditioners' training centre at Elstree, near London.

"Our engineers were very impressed with the equipment and how easy it was to install and commission. You normally get some hitches but this installation went as smoothly as we could have wanted."

Following the installation, Crossflow, which has been installing air conditioning and ventilation since 1972, received full marks in the Fujitsu internal installation audit.

Chris Dymond, Fujitsu Services Internal Project Manager, said: "Both designer and installer had never used Fujitsu VRF before and are well impressed, saying it is as good, if not better, than other manufacturers."

Fujitsu's Sales & Marketing Director, Ian Carroll says: "It was pleasing to work with Crossflow on this prestigious project for Fujitsu Services. It shows that when installers see the quality and flexibility of our VRF, backed by our first class technical team, they will then put Fujitsu forward on future projects."

Fujitsu Air Conditioners contact in Ireland is Technical Manager Martyn Ives.
Tel: Mobile 0044 - 7747 624520;
Landline: 0044 - 208 731 3450
email: martyn.ives@fgeurofred.co.uk;
www.fgeurofred.co.uk. ■

30% energy saving from Liebert adiabatic free-cooling by Core AC

The Liebert AFC – the world's first adiabatic free-cooling chiller – is now available in Ireland from Core Air Conditioning. Designed to maximise free-cooling capabilities while delivering guaranteed availability within the data centre environment, it delivers three cooling technologies in one highly-reliable and efficient unit, saving businesses up to 30% in annual energy costs.

The Liebert AFC combines the exceptional levels of energy efficiency allowed by adiabatic free-cooling, together with the endless availability guaranteed by the multi-scroll compressor back-up. This pioneering adiabatic system enables water evaporation which lowers the air temperature entering the free-cooling and condensing coils, consequently increasing free-cooling operation and mechanical efficiency.

Moreover, it maximises free-cooling all year round while maintaining 100% cooling availability, even under the most critical conditions. These include fluctuating power supplies, water shortages and extreme external air temperatures.

"This is genuinely pioneering technology", says Steve Wood, Sales Manager, Core AC. "A consolidated design and the integration of new technologies have led to the most efficient water cooler in the market, resulting in partial Power Usage Effectiveness (pPUE) of 1.08, lower than any other chilled water system. In addition, the Liebert AFC provides a significant increase in terms of energy savings when compared with other efficient chilled water systems on the market.

"For example, in a typical 1.4MW data centre located in central Europe running at full load, a free-cooling chiller will consume approximately 963,000 kWh of energy per year, based on current market offerings. However, this is reduced to 645,000kWh over an annual period with the Liebert AFC. This reduction in energy consumption equates to a cost saving of almost €50,000 based on an energy cost of 0.15 €/kW."

Liebert AFC 14 fan adiabatic

Emerson Network Power is continually striving to develop data centre solutions for the future. These are designed to optimise availability to the customer in any circumstance and this commitment was marked in 2014 with the launch of its dedicated Thermal Management business. Drawing on the combined experience and industry-leading knowledge within the Thermal Management business, the Liebert AFC solution seeks to address the complex requirements of enterprise-scale and co-location facilities, in order to reliably and efficiently control and manage heat.

"Over the last few years the data centre ecosystem has become mission-critical in supporting major innovation trends such as cloud computing, the latent power of 'big data', and the exponential rise of mobile devices", says Austin McDermott, Managing Director of Core AC. "This, in turn, has made for an increase in operating temperatures within which IT infrastructure functions.

"Our latest Liebert AFC adiabatic free-cooling chiller seeks to address some of the evolving pressures around this growing requirement for heat management. Driven by our understanding of the challenges facing our customers, we are adopting innovative methods – like the newly-introduced adiabatic cooling – to deliver pioneering data centre solutions."

Contact: Austin McDermot or Steve Wood, Core AC. Tel: 01 - 409 8912; email: austin@coreac.com; steve@coreac.com

'LOTS' OF UNCERTAINTY SURROUNDING ErP AND COMMERCIAL BOILERS

Boiler design and specification are influenced by a number of national and European regulations that are divided into 'Lots' that cover different product groups. Ross Anderson, Director of the Industrial and Commercial Energy Association (ICOM), takes a look at the current situation.

For many years the commercial and industrial heating industry has been involved in an evolutionary process of product design in response to changing regulations and standards. In particular, these efforts have been directed at improving energy efficiency and reducing emissions with a view to both maximising the performance of the products while also gaining commercial advantage over competitors.

The result of this is that products have continued to improve and this is clearly a benefit to all concerned. More recently though, politicians, and in particular the European commission, have become involved in this process. This involvement has resulted in the Energy Related Products Directive (ErP). Under this Directive sit the Ecodesign requirements for energy-related products.

The purpose of these regulations is to ensure that products continue to improve and that manufacturers are required to comply with a standardised set of performance standards. There are some aspects of the regulations, however, that are as yet unclear, thereby creating some uncertainty throughout the supply chain.

To set the scene, Ecodesign has a number of sections, known as "Lots", each of which has a fairly broad scope. Much of the attention has been on Lot 1 and Lot 2 which came into force on 26 September 2015. Lot 1 covers the Ecodesign requirements for space heaters and combination heaters, which refers to boilers up to 400 kW operating on gas and oil fuels. Lot 2 relates to water heaters and storage tanks up to 400kW input or 2000 litres capacity.

On a positive note, most of the issues relating to these Lots have been settled. With particular reference to boilers, Lot 1 requires that manufacturers of boilers with capacities between 70kW and 400kW will need to include information in the technical fiche, but do not need to comply with the more onerous labelling aspects of the regulations.

Currently, this means that the majority of commercial boilers will not need to comply with the Ecolabelling regulations. However, it is interesting to note that the improved thermal performance of buildings, combined with the growing use and integration of renewables, is leading to a general reduction in the size of boilers required for commercial applications. Looking to the future, this may well result in more sub-70kW boilers being used in these applications – though by then the regulations will probably have changed again!

One area where there is still a serious issue is when new boiler shells and burners up to 400kW are supplied separately, as it is still unclear whether these fall within the scope of Lot 1. In relation to upgrades, it has been

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Single boiler output

50kW to 110kW

Cascade output

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Sirius Two FS

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Single boiler output

50kW to 110kW

Cascade output

Up to 440kW

Sirius FS

Floor standing condensing boiler

Single boiler output

130kW to 160kW

Cascade output

Up to 640kW

Sirius FS

Floor standing condensing boiler

Single boiler output

400kW and 525kW

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confirmed that identical replacement items will be available for a further three years, up to 26 September 2018.

Another area of uncertainty is the status of the regulations for gas and oil boilers between 400kW and 1MW, and solid fuel boilers between 500kW and 1MW (the latter being covered under Lot 15).

This is because larger boilers (1MW to 50MW) have to comply with the Medium Combustion Plant (MCP) Directive. So, there is a large gap between the 400kW gas and oil boilers covered by Lot 1 and the 1 MW boilers covered by the MCP Directive.

There is a similarly large gap between the solid fuel boilers up to 500 kW covered by Lot 15 and the MCP Directive. In fact, the original draft document for Lot 15 had a scope up to 1,000kW, but this was reduced to 500kW in a subsequent draft to fall in line with the current standard – EN303.

Implications

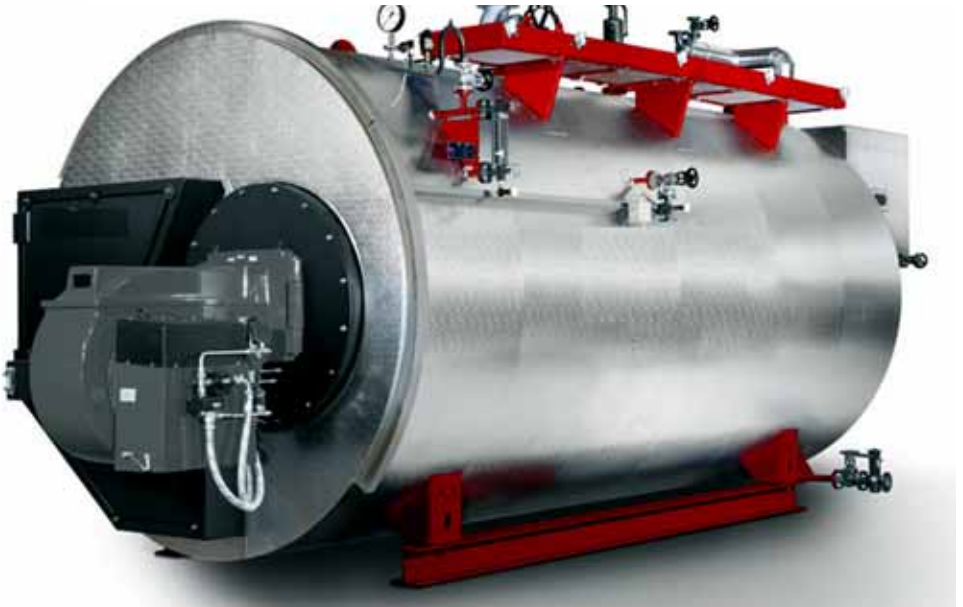
Clearly, these areas of uncertainty represent a major headache for the manufacturers as a lack of clarity makes it difficult to reach informed decisions about where best to make future investment in production.

However, it is not just manufacturers that are affected as the absence of a clear policy potentially creates issues for specifiers and installers as well. For example, it could potentially encourage the use of less efficient boilers in the range between 400kW and 1000kW as these will only have to meet existing regulations. Similarly, if the specification is for a 1.2MW boiler, it would fall within the remit of the Medium Combustion Plant Directive, whereas two 600kW boilers would not necessarily be covered by the new regulations.

Moreover, a specifier selecting separate boilers and burners under 400kW has no meaningful guidance as to what performance criteria will ensure compliance. This could lead to specifications as vague as "in accordance with the Ecodesign Directive".

As well as relating to efficiency, the Ecodesign requirements also set limits for emissions. In the case of solid fuel boilers that comes under Lot 15 where emissions levels are at such a low level that current designs will find it very difficult to comply. For example, to ensure that biomass boilers meet particulate matter (PM) levels, the most effective solution will be to add filters in the flue outlet on the boiler. These will require more plant room space and will add to overall costs.

> "The purpose of these regulations is to ensure that products continue to improve and that manufacturers are required to comply with a standardised set of performance standards.



The improved thermal performance of buildings, combined with the growing use and integration of renewables, is leading to a general reduction in the size of boilers required for commercial applications.

Looking to the future

While this article focuses on areas of uncertainty, the situation isn't all doom and gloom. Progress is being made in these areas and there is good reason to believe these issues will be resolved in the near future. To help achieve this, associations such as ICOM continue to work with regulatory bodies throughout Europe to steer the regulations in a direction that works well for all stakeholders.

See www.icom.org.uk/ for further information. ■

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by Heat Merchants & Bosch Commercial Heating

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Bosch are one of the world's leading manufacturers of heating products. With renowned high quality standards and after sales support, Bosch provide a long lasting and cost-effective solution for any project.

GB162
Boiler Cascade

GB162 - 50, 65, 80, 100kW
Compact Power

The GB162 boiler is perfect for both large domestic and commercial applications. This boiler has outputs of 50, 65, 80 and 100kW, with the ability to cascade up to 800kW as part of a multi-boiler 'cascade' system.

Its compact dimensions make it especially suitable for installations where space is restricted, and, for larger heat demands, the GB162 can be easily combined in any combination of 2 to 8 boilers either in-line or back-to-back, using the Bosch cascade kits.

Heat Merchants have 32 branches nationwide supported by a fully indemnified Technical Design and Specification team specialising in designing integrated heating systems for both commercial and large domestic projects.

For more details visit **www.heatmerchants.ie** or call **090 6442300**

Heat Merchants

Quality System Solutions for large domestic and commercial boiler projects

C&F Quadrant is one of Ireland's leading suppliers of heating and plumbing products with a portfolio of market-leading brands catering for both commercial and domestic applications. With offices in Dublin and Belfast, and a network of regional representatives and merchant trading partners, comprehensive all-Ireland coverage is assured.

C&F Quadant office and warehouse headquarters in Dublin

Complementing and supporting the extensive product portfolio is a team of highly-qualified, engineering-led, personnel. Experience runs to the core of C&F Quadrant with long service commonplace at all levels, from trade counter personnel through to technical support, field sales engineers and back-up administration.

This long-service feature is mirrored in the long-standing trading relationships it enjoys with many of its suppliers, some of which date back 20, 30 and even 40 years. as in the case of Bosch Commercial.

Today's commercial and large domestic projects invariably demand system solutions, as opposed to the supply of one or two products and some accessories. C&F Quadrant fully recognises this and so, in addition to the expansive product portfolio, provides full engineering design assistance on all projects.

Fully-qualified and experienced engineering personnel liaise, where appropriate, at the earliest opportunity with the design consultant, contractor and client to ensure that the best possible solution is arrived at. Apart from an understanding of the strengths of each product and the related ancillaries that make up the overall system solution, they also provide advice on energy usage, life-cycle returns on investment, regulatory compliance and carbon reduction.

C&F Quadrant runs regular training programmes and CPD-accredited seminars/lectures for both commercial and large domestic installers to help them keep abreast of the latest developments, and to advise them of changes that are coming down the line.

In addition, it has display centres located at various merchant stockists throughout the country so that product and topic-specific training and CPD programmes can be delivered at a local level.

C&F Quadrant is not just about product supply ... it is about delivering cost-effective building services solutions using quality products from market-leading manufacturers.

Boilers from all brands represented are listed on the SEAI Triple E Product Register and qualify for the Accelerated Capital Allowance Scheme.

C&F QUADRANT

CREATING A QUALITY ENVIRONMENT

Dublin: +353 (1) 630 5757
Belfast: +44 (28) 90 36 55 55

Email:sales@cfquadrant.ie

BOSCH
COMMERCIAL

Bosch has specialised in commercial and industrial boiler construction for 150 years, using innovation, quality and performance efficiencies to establish industry benchmarks others have sought to emulate. Global players such as Coca Cola, BASF, Siemens, Heineken, Nestlé and Esso all rely on its commercial and industrial steam boilers, thanks to its pioneering designs, advanced production facilities and IS09001 Quality Management System.

Bosch commercial boilers have a very strong presence in Ireland, thanks largely to its long-standing partnership with C&F Quadrant, who have been distributing and supporting the brand for 40 years.

Today's Bosch portfolio includes energy-efficient cast iron boilers, and stainless steel and condensing boilers for commercial heating solutions. One of the latest additions is the Buderus GE range which can achieve up to 92% NCV with low-flue gas temperatures and effective all-round thermal insulation. Easy to install and maintain, the cast iron boiler sections can be transported and supplied separately for assembly in the plant room.

Unical®

C&F Quadrant is renowned for the quality commercial solutions the company offers and that reputation has been enhanced with the introduction of the Unical range last year.

The featured Unical boiler currently on offer is the impressive Modulex EXT enbloc modulating boiler that has flexibility as its key advantage.

The range comprises 12 gas condensing models with outputs from 100kW to 900kW. With a cascade installation, the boiler output capacity can be widened well over the 900kW range. Utilising patented constructive technology, Modulex EXT delivers a certified efficiency up to 109% at the minimum modulated capacity. Seasonal efficiency is +30% when compared with conventional boilers while the inimitable modulation ration is up to 1:40. There is also a modulating pump directly managed by the boiler to ensure the maximum condensation at all regimes.

These levels of output are matched by simple installation. Not only is outdoor installation possible with a protection degree of IPX5D, but the compact and light construction makes it easier to manoeuvre.

ACV

The new generation Prestige wall hung boilers from ACV comprises an extended range of four models in sizes 50kW, 75kW, 100kW and 120kW. At the core of the Prestige portfolio is ACV's unique, self-cleaning stainless steel heat exchanger, developed and improved after intensive research and laboratory testing.

Prestige boilers can be installed in a cascade from two to eight units with a maximum combined output of 920kW. A cascade installation greatly improves the system efficiency and fuel usage, resulting in reduced running costs and lower emissions. There is also an integrated non-return flue valve to make fluing options easier.

Installation and maintenance is simple as all parts are serviceable from the front of the unit. The improved ACVMAX® system control also has an easy menu structure which covers up to 80% of standard installations, easy diagnostics and full text error messages and problem-solving information.

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Tel: +353-1-630 5757 Fax: +353-1-630 5715

C&F Quadrant (NI) Ltd
Unit 15
Abbey Business Park, Mill Road, Newtownabbey
Co Antrim BT36 7BA
Tel: 02890 365555 Fax: 02890 365565

Heat Merchants now supplying Bosch Commercial Heating Solutions

Heat Merchants has been developing its product portfolio in recent years and the latest addition to its commercial offering is the extensive Bosch commercial heating range. Established in 1895, Bosch Commercial is now one of the world's leading manufacturers of heating products, specialising in complete system solutions for the commercial and industrial heating sectors. Individual boiler outputs go from 50kW to 38,000kW and Heat Merchants can now offer the full range, in addition to technical support and specification service.

"Bosch Commercial is a global market-leading brand and we are delighted to have been selected as a supply partner for its extensive commercial heating range. Our Technical Design team is available to assist heating engineers with specification and product selection for any commercial application", said Alan Hogan, Managing Director, Heat Merchants Group.

One of the core ranges offered by Heat Merchants is the Bosch GB162, a range of gas-fired boilers with 50kW, 65kW, 80kW and 100kW outputs. The 50kW offers installation flexibility for heating engineers and bridges the gap between domestic boilers and the current light commercial range.

The GB162 50kW boiler is suited to both large-scale domestic installations and light commercial applications. With net efficiencies of up to 110% and NOx emissions of less than 40mg/kWh, the GB162 range provides clean, low-carbon heating and hot water. It can also be installed in a cascade arrangement up to 800kW with the ability to modulate down to as little as 2.5ºC of the total output.

Geoff Hobbs, Bosch Commercial Business Development Director, commented: "By adding a 50kW gas-fired boiler to our portfolio, we are making a commitment to those installers who are accustomed to working with large domestic or smaller commercial applications. The GB162 is already renowned for being a very simple boiler to install, and the 50kW model gives extra flexibility to the range. The new ranges are also timely in respect of the recent application of the ErP Directive that says new commercial boilers with an output of between 70kW and 400kW now have to be of a condensing type.

GB162 multi-boiler cascade system — boilers can be connected in-line or back-to-back using the Bosch Cascade Kits to achieve an overall condensing output of up to 800kW.

Alan Hogan, Managing Director, Heat Merchants Group, pictured with Phil Divall, National Commercial Manager, Bosch Commercial & Industrial at the recent partnership announcement.

"Condensing boilers may have been mandatory in the domestic market for over a decade, but it is only recently that the introduction of the Energy related Products (ErP) Directive has seen the commercial sector follow suit. Early estimates suggest that around 70% of commercial boilers sold each year will now be of the wall-hung variety, whereby systems comprising of multiple smaller output boilers in a cascade arrangement will become more common.

"ErP requirements are by no means alien to the vast majority of installers, but the need to follow condensing boiler best practice will grow in importance as the shift away from cast iron gathers pace. Ultimately, as a regulation set by the European Union, the ErP Directive is designed to drive improvements in the efficiency and performance of heating and hot water products".

Contact: Heat Merchants Head Office. Tel: 090 642 4000, or log on to www.heatmerchants.ies to locate your nearest branch outlet. ■

With the future in mind

Prestige Solo
50 - 75 - 100 - 120
High capacity condensing boilers

- Quality components
- Efficiency and modulation
- Quiet operation
- Stainless steel heat exchanger
- ACVMAX® electronics
- Integrated cascade control
- Engineered with the future in mind
- Easy maintenance
- State-of-the-art electronics

All ACV boilers are listed on the SEAI Triple E Register, meaning the client can claim the full cost of the boilers back in the form of a tax refund under the Accelerated Capital Allowance (ACA) Scheme

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ACV
excellence in hot water

Adisa space-saving boilers from Euro Fluid Handling Systems

As a long-established market sector leader, Euro Fluid Handling Systems is renowned for the quality of both the products and services it provides. It has a reputation for listening and understanding precisely what the client's requirements are, and then engineering the most energy efficient, optimum performing, cost-effective solution.

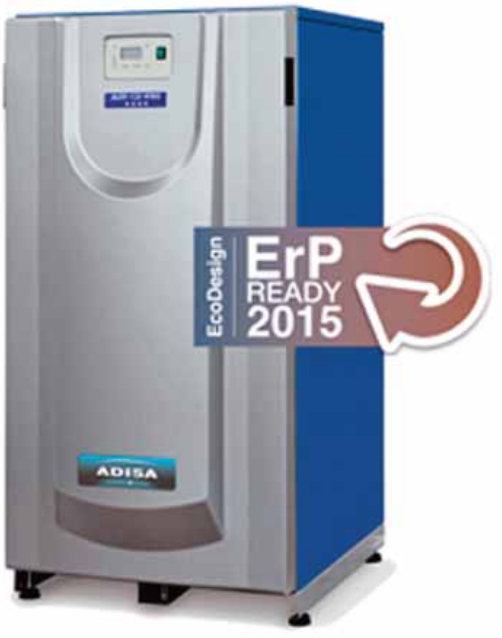
Just recently it strengthened its portfolio with the addition of Adisa, the Spanish manufacturer of high-efficiency condensing boilers and pre-packaged skids and plant rooms for gas installations.

Established in 1961, Adisa entered a new phase after its acquisition in 2014 by the Hitecsa Group, the European leader in the design and manufacture of air-conditioning equipment. This hasadded further impetus to the strength of the brand.

Adisa boilers are versatile and suitable for all manner of applications, especially in situations where space is at a premium, such as the ever-decreasing size of plant rooms. This was the case recently at the new AIT International Arena, Athlone where Euro Fluid devised the perfect solution comprising two Adisa ADI CD 950 gas fired condensing boilers.

Adisa not only push quality standards by offering 316 stainless steel heatexchangers as standard, they also boast an impressive compact footprint of 1040mm wide by 1160mm deep for each 950kW unit.

The Adisa range of modulating gas condensing boilers from Euro Fluid.



All Adisa boilers are fully ErP compliant

Features and benefits

- Outputs from 68kW up to 905kW;
- 316 stainless steel heat exchanger;
- Condensing up to 108% seasonal efficiency;
- Smallest footprint per kW output;
- Ecological combustion: NOx class 5 NOx < 10 ppm, CO around 47ppm;
- Available skid-mounted with cascade piping system and outdoor enclosures;
- CE certified efficiency up to four stars;
- Modulating starting from 30% of the power;
- Many Control options, including remote webserver monitoring.

Adisa boilers are also recognised as one of the most efficient on the market and are listed on the SEAI Triple E Register, meaning the client can claim the full cost of the boilers back in the form of a tax refund under the Accelerated Capital Allowance (ACA) Scheme.

Contact: Euro Fluid Handling Systems. Tel: 01 – 460 0352; Bernard Costelloe. Mobile: 087 – 250 4415; Stephen Costelloe. Mobile: 087 – 934 6060; email: info@euro-fluid.com

Baxi Potterton Myson offers an extended condensing range to capture new market

Contractors seeking a one-stop range of reliable high-efficiency commercial boilers can now find a product to meet any application, thanks to the launch of an all-star line up from Baxi Potterton Myson, one of the most established names in the heating industry.

Historically, Potterton Commercial has been the manufacturer of choice for customers seeking reliable boiler solutions because of its brand leadership in supplying cast iron boilers to the commercial sector. This developed in the last 10 years to embrace new condensing technology with both wall hung and floor standing cast aluminium products. These offers have now embraced the increased demand in the market for stainless steel solutions.

Potterton Commercial's Sirius FS is a technically sophisticated range of floorstanding, stainless steel condensing boilers.

Potterton Commercial has extended its range of Sirius boilers to offer outputs from 50kW up to 525kW, including new outputs for single floor standing boilers of 400kW and 525kW.

Designed with an innovative dual burner configuration, the range offers an industry-leading modulation ratio of 10:1. The stainless steel, triple-pass heat exchanger and compact design make it an energy efficient, cost-effective heating solution for large projects such as schools, hotels, care homes and leisure facilities.

For lighter commercial applications such as pubs, shops and offices, the range is available in outputs from 50kW to 110kW as a single boiler, and up to 440kW using cascade pipework kits. Particularly suitable for replacement projects, it can be used in large domestic properties and small commercial premises, as well as medium-sized applications.

Vincent Broderick, Sales Director at Baxi Potterton Myson, said: "We're proud of this extended range of Sirius boilers. The new outputs have been introduced in response to feedback from customers who told us they wanted to give end-users the peace of mind that comes with specifying a high-performance range like the Sirius. All Sirius condensing boilers include a five-year parts and labour warranty, offering complete peace of mind for the contractor and end-user alike.

"The new additions mean that we can now offer contractors and specifiers a truly reliable one-stop-solution as the only manufacturer offering both cast aluminium and stainless steel options on boilers, in addition to the Andrews water heating product range for commercial projects. We can offer an in-house design and consultancy service as well as the excellent commercial "Size it" design software.

Contact: Baxi Potterton Myson.
Tel: 01 – 459 0870;
email: sales@potterton-myson.ie;
www.potterton-myson.ie ■

How advanced plant monitoring can lead to smart preventative maintenance and reduced costs

All facilities need to reduce costs, eliminate risks, improve system design and help manage maintenance. Condition monitoring, together with energy monitoring, should therefore be integrated within the enterprise system. To optimise maintenance service there must be complete transparency throughout the enterprise, from shop floor to top floor.

Mitsubishi Electric's SmartCheck solution is an independently-operating, compact, modular measurement system for the permanent monitoring of machines/systems with mechanical bearings. It is available in the market for use as an individual monitoring device for smaller stand-alone units, as well as for integrated concepts such as comprehensive condition monitoring of machines and manufacturing processes.

Mitsubishi Electric's SmartCheck solution takes intelligent machine monitoring to a new level. Compact, easy to operate and at a unique price/performance ratio, it makes the online monitoring of chillers, air handling units (AHUs) and ventilation systems very cost-efficient.

This innovative real-time monitoring system employs ground-breaking technologies and trend-setting functions. These include the combination of information provided by the measurement of classic parameters and vibration-based process parameters. The measuring system detects potential damage to machines early and reliably helps to avoid unplanned shutdowns and costly secondary damage.

Thus, Mitsubishi Electric's SmartCheck solution already offers numerous options that future machine monitoring schemes cannot be imagined without.

The scalable monitoring system provides high system availability and contributes towards ensuring trouble-free, continuous operation. The overall system efficiency and energy efficiency are also very closely linked.

Furthermore, the solution allows predictive maintenance to be carried out. This not only reduces lifecycle costs but also plays a role in reducing energy consumption, thanks to its ability to detect early signs of wear.

Mitsubishi Electric's FAG SmartCheck.

Completed by a unique full service around machine diagnosis and rolling bearings, the Mitsubishi Electric's SmartCheck solution makes a valuable contribution to optimising processes and reducing life cycle cost (LCC) as well as total cost of ownership (TCO).

One recent successful application involved a sewage treatment plant with the capacity to serve 34,000 residents. At the secondary sedimentation tank three pumps are connected to the return-activated sludge pumping station. Within a year, one of the three screw pumps failed due to bearing damage. This resulted in costly, time-consuming repair work and loss of service.

A Mitsubishi Electric's SmartCheck solution was installed on the three pumps to help solve the problem re-occurring in the future.

Now the SmartCheck devices measure the vibrations and temperature of the gearboxes. In the event of changes in vibration, the system provides data at an early stage about these deviations, which can be the initial signs of potential damage. In the event of irregularities, a detailed error message is sent to the customer's control system via the Mitsubishi Electric control unit. This ensures that the problem can be rectified quickly and in a target-oriented manner.

Smartcheck supports the concepts of transparency through different levels of measurement. Information can be automatically transferred to multiple information levels. Smartcheck allows Mitsubishi Electric to provide a holistic approach to assess the condition of all building or plant.

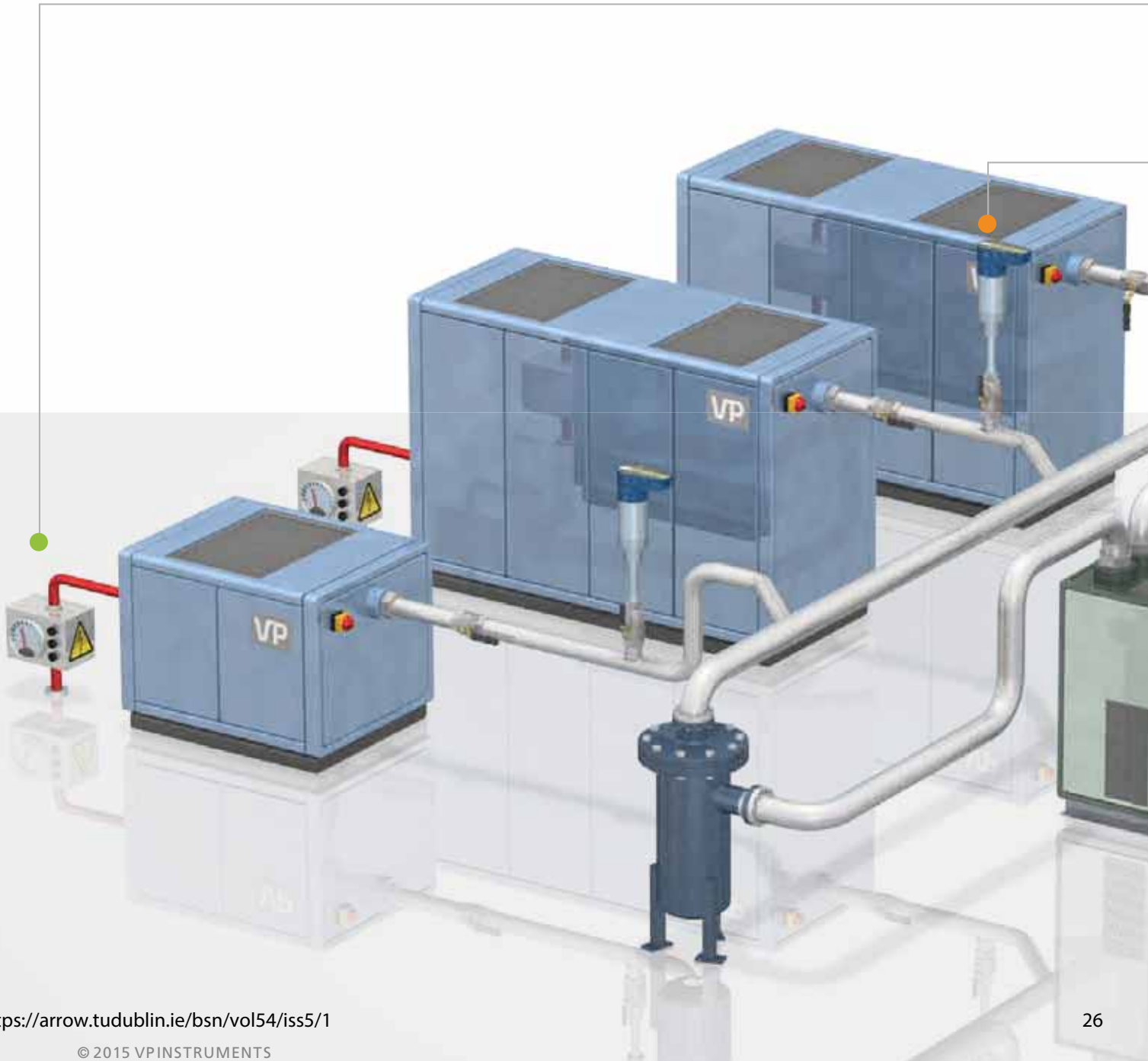
Contact: Mitsubishi Electric.
Tel: 01 – 419 8800;
email: sales.info@meir.mee.com;
www.mitsubishielectric.ie ■

MANOTHERM AUTOMATIC CONTROLS

VP INSTRUMENTS

Get the complete picture from Manotherm

Measure, monitor and manage your compressed air system to reduce your energy consumption. Our flow meters are used to establish baseline air flows and energy use. VPVision warehouses and analyzes flow data. It becomes the cornerstone of an energy management system for any plant seeking to sustain the energy efficiencies they have achieved.



Monitor efficiency
No more assumptions: We offer total solutions for monitoring the efficiency of your compressors.

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Monitor your pressure loss over the entire air treatment and take timely action.

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Monitor dew point to check the performance of your air dryer. Make sure that the air quality meets your standards.

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The Controls Centre,
4 Walkinstown Road, Dublin 12.
Tel: 01 - 452 2355/452 2229
Fax: 01 - 451 6919
email: info@manotherm.ie
web: www.manotherm.ie

Drawing not to scale.

UltraCella completes Carel range for coldrooms

Carel's new UltraCella coldroom controller is the latest addition to the company's Cella range of coldroom solutions and is the largest of three controllers in the range. It is aimed at medium, large and specialist coldrooms and represents an impressive evolution based on the experience and success of the existing and well-established mid-sized MasterCella controller.

SmartCella range for small coldrooms now available from Carel Ireland.

Carel also introduced SmartCella range for small coldrooms earlier this year and can now offer solutions for coldrooms and refrigerated storage applications of all sizes.

UltraCella enables total control including compressor management, defrost management, evaporator fans management and data logging.

It is designed to be easy to install with an installation track for DIN rail and more GND terminals. Commissioning is simple and straightforward with several ways to set up the coldroom using the Wizard. This guides installers through set-up by asking a series of simple questions. It can select one of 10 pre-set configurations for main conservation room types or upload the profile from a USB stick.

The interface design is excellent and day-to-day operation is highly intuitive. The big display ensures clear messages and a double display option allows for two functions to be shown at the same time, for example temperature and humidity.

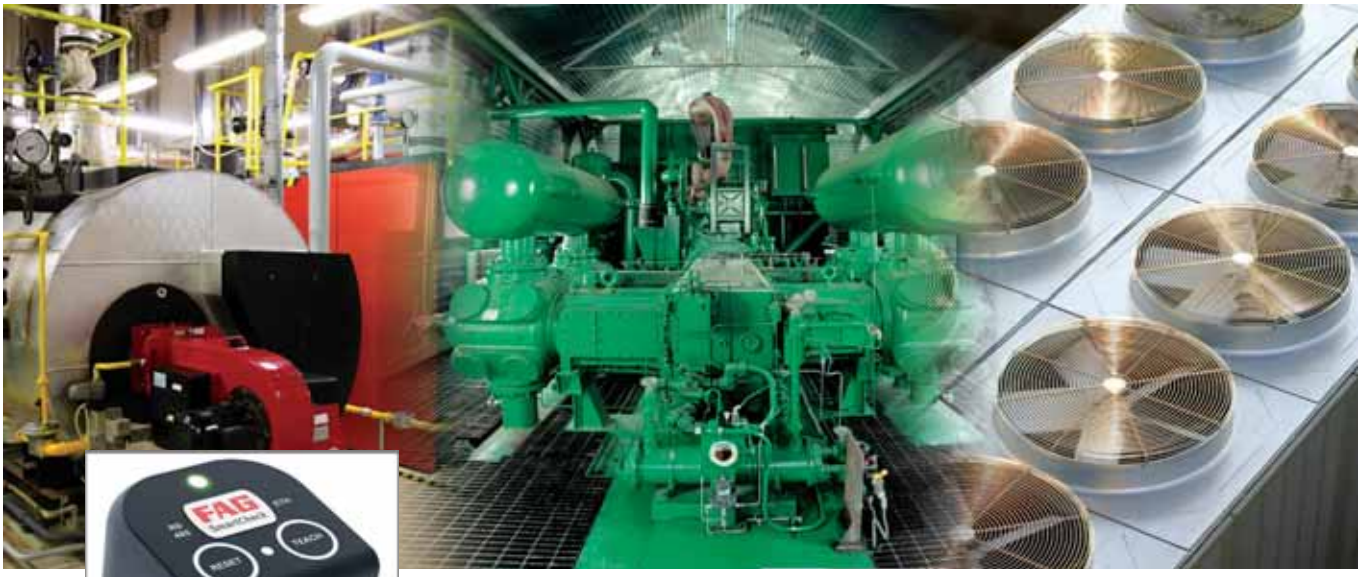
Other key features include floating condensing pressure for energy saving; variable speed condensing fan control by pressure/temperature; humidity logging; high and low humidity alarms; set-point variation by digital input; smart management of the light activation, and many more.

UltraCella is fully compliant with HACCP international food safety standards. It can store and visualise up to three high temperature alarms and show the day, hour, minute and temperature on a scrolling text display.

The feature that makes UltraCella unique is its innovative modular design which, as an open platform, allows features and upgrades to be added quickly and easily as they are released.

Contact: Carel Ireland. Tel: 01 – 835 3745; email: sales@carel.ie www.carel.ie ■

Is downtime eating into your costs?



To optimise maintenance service there must be complete transparency throughout the enterprise, from shop floor to top floor. The Smartcheck measuring system provides this by detecting potential damage to machines early, helping to avoid unplanned shutdowns and costly secondary damage.
Compact, easy to operate and at a unique price/performance ratio, Smartcheck makes the online monitoring of **Chillers**, **Air Handling Units** (AHU's), and **Ventilation Systems** cost-efficient.

ie3a.mitsubishielectric.com/FA

Standard Control Systems continues expansion drive

Despite the downturn of recent years Standard Control Systems has undergone an expansionary phase over the last 18 months, doubling the size of its Dublin headquarters, opening a new branch office in Newtownabbey, Co Antrim, and continuing to win major projects across the UK, mainland Europe and in the Middle East.

Now regarded as the default provider for the provision of integrated BEMS within the data centre sector, it was recently awarded OHSAS18001 certification and has just finished a large project with Jones Engineering in Saudi Arabia.

Standard Control Systems is primarily involved in the provision of fully-functioning, highly-complex but user-friendly BEMS systems across all segments of the construction industry. Services include the engineering, supply, installation and commissioning of control panels, field controls, process controllers, bespoke GUI mimics and software programming.

"The primary objective of the solutions we provide", says Standard Control Systems' Sean O'Toole, "is to ensure maximum performance of the facility while, at the same time, continually monitoring and interfacing with all the building services elements to reduce energy consumption and save on running costs".

Sean O'Toole

The company has considerable experience and expertise in the close control and monitoring of:

- Data Centres;
- Pharmaceutical;
- Healthcare;
- Industrial;
- Educational;
- Hotel and Leisure;
- Commercial;
- Retail.

The core services provided by Standard Controls Systems fall under three primary categories – BEMS, Validation and Façade Management System (FMS). Brief details are as follows.

BEMS – Standard Control Systems designs and installs BEMS solutions to control and monitor buildings' mechanical and electrical equipment such as air handling and cooling plant systems, lighting, power systems, fire systems and security systems. The solutions provided include both the software and the hardware;

Validation – Validation is applied to many aspects of pharmaceutical manufacturing, including instrumentation, HVAC systems etc. In each case the objective is to produce "documented evidence, which provides a high degree of assurance that all parts of a facility will consistently work correctly when brought on-line". In all instances the company will work tirelessly with clients to assist with 21CFR Part 11 compliance.

Façade Management Systems (FMS) – Standard Control Systems has worked on some of the most prestigious commercial buildings in Ireland. Many of these buildings employ Façade Management Systems (FMS) along with sophisticated BEMS. SCS's expertise in this area is unrivalled and ensures that the BEMS and FMS are fully integrated to reduce energy consumption and maximise occupant comfort. The company supplies and commissions Façade Management Systems created by the world's leading manufacturers of natural ventilation and solar shading technologies.

Contact: Sean O'Toole, Standard Control Systems. Tel: 01 – 4291800; email: info@standardcontrol.ie ■

Career opportunities at Standard Control Systems

Standard Control Systems are seeking experienced BMS commissioning engineers to work on sites in Ireland and mainland Europe. The company would also like to hear from electricians and engineers who want to progress into this dynamic industry. CVs to sking@standardcontrol.ie

CIBSE CASTLEKNOCK OUTING A 'SHOT GUN' SUCCESS

The annual CIBSE golf outing was once again held at Castleknock Golf Club with Daikin as the main gold-category sponsor and Wilo and Jones Engineering taking up the silver-category slots. Apart from that, the individual hole sponsorships represented a who's who of the building services sector, demonstrating once again the all-industry nature of this event.

Results

First
Team Hitachi: Fergus Daly, Paul Tighe, Mick Curran and Paul Keegan

Second
Team Jones Engineering (Team B): Martin Duffy, Barry Steele, Martin McCarthy and Steve McCabe

Third
Team Winthrop Engineering: Michael Murray, Gavin Daly, Alan Paterson and Niall Lambe

Longest Drive *(sponsored by Wilo)*
Alex O'Reilly

Nearest the Pin *(sponsored by Jones Eng)*
Ian Sutton

Inside the Pro *(sponsored by Jones Eng)*
Niall Bourke, Paul Keegan and Dylan Brophy

Participating Teams
Aspect Environmental; Arup; Baxi Potterton Myson; Daikin; Designer Group; Design Light; General Lighting; Grundfos; Hitachi; Heat Merchants; Hevac; Hevac Ventilation; Jones Engineering; Kedington; L Lynch & Co; Mercury; Mr Vent; T Bourke & Co; Winthrop Engineering; Sisk.

In a change from the usual format, this year's outing featured a shot gun start with 24 four-ball teams participating. All entered into the spirit of the occasion and arrived in excellent time for registration and collective tee-off at 12.30pm sharp. There was some slight drizzle early in the morning but, by the time the teams went out, it was dry and warm, with a notable wind that added another dimension to the "longest drive" competition.

Scoring was calculated under a Florida scramble in a bid to allow for fairer team results. This meant that the player whose shot was selected as best shot did not get to play the next shot. This also meant no delays on the course, the format working so well that after two hours of play the teams were exactly half way round. Four hours after tee off the first teams began appearing back

With all the score cards returned by approximately 4.45pm, the golf committee undertook the difficult task of selecting the various category winners, while the golfers showered and adjourned to the bar for some post-golf banter and socialising.

Thanks to the shot gun format, virtually everyone who played remained on for the dinner and presentation of prizes with the meal being served at approximately 6pm and the presentation of prizes being completed by 7.15pm.

Individual prizes were presented for longest drive, nearest the pin and inside the pro, with team prizes going to third, second and first. The premier team award is the PJ Doyle Trophy, first presented in 1990 in memory of Patrick J Doyle following his premature death. PJ was widely known and respected throughout the industry, was CIBSE Chairman from 1988 to 1990, and a director at HA O'Neills.

Right: Overall winners – Team Hitachi: Paul Tighe and Fergus Daly with CIBSE Chairman David Doherty and John Valentine, Daikin, gold sponsor on the day.

A dejected Frank English rues the car that got away. He was just millimeters away from a hole in one on the 18th. Still, David Doherty presented him with a consolation model car at the dinner!

John Valentine, Daikin with David Doherty, CIBSE Ireland Chairman and the car that got away, just!

CIBSE Ireland Chairman David Doherty with Longest Drive winner Alex Reilly (sponsor Wilo).

Inside the Pro winner Niall Bourke with Fergus Daly (standing in for Paul Keegan), David Doherty, CIBSE Ireland Chairman and Barry Steele, Jones Engineering (sponsor).

CIBSE Ireland Chairman David Doherty with Nearest the Pin winner Ian Sutton and Barry Steele, Jones Engineering (sponsor).

Second – Team Jones Engineering: Barry Steele with David Doherty, CIBSE Chairman, Martin McCarthy and Martin Duffy. Steve McCabe was the fourth member of the Jones Engineering Team.

Third – Team Winthrop: Niall Lambe with Alan Paterson, David Doherty, CIBSE Chairman, Gavin Daly and Michael Murray.

TIDL Thermal Covers

Thermal Insulation Distributors Ltd (TIDL) is Ireland's leading manufacturer and distributor of thermal and fire-stopping products for commercial and industrial applications. Last month in *Building Services News* (July/August 2015 edition) we featured an overview of the whole company while this month sees the first of an ongoing series profiling the various divisions within TIDL, beginning with the Thermal Covers Division.

Thermal covers serve a multitude of purposes (see panel), all of which are centred on two primary benefits – energy savings and the health and safety of operatives working near the plant in question.

TIDL's Thermal Covers Division produces a range of products including removable insulation jackets for industrial plant and equipment such as valves, flanges, strainers, boiler ends, heat exchangers and bespoke equipment. Virtually everything is custom made, designed and manufactured specifically for each application.

The process begins with TIDL engineers conducting thermal imaging analysis to identify areas of serious heat loss and/or possible burn risk to personnel. On foot of that analysis, the design team produces a customised drawing for each piece of equipment and this forms the manufacturing template that ultimately leads to the bespoke range of removable insulation covers for the whole project.

Typical plant room "before and after" installation by TIDL Thermal Covers.

TIDL Thermal Covers provides solutions for indoor and outdoor environments, including high-specification covers for the pharmaceutical, food, beverage, IT and petrochemical industry sectors.

Recently supplied contracts include:

- Intel
- Diageo
- Pfizer
- HSE
- Corrib Gas Terminal.

All products are manufactured using Class O materials to BS476 Part 6 and 7 to comply with the Building Regulations Part B.

Further endorsing the quality of the products is TIDL's accreditation as an ISO 9001:2008 certified company for the manufacture, sale and distribution of thermal insulation products.

Consequently, all covers are quality checked in accordance with ISO 9001:2008 procedures before leaving the TIDL production facility.

Whatever the thermal cover requirement TIDL's Thermal Covers Division can provide a bespoke solution that protects personnel, reduces energy usage and delivers significant operational cost savings.

To discuss your particular project contact Mark McGuire, General Manager. Tel: 086 – 722 6769; email: m.mcguire@tidl.ie or Shaun Gillen, Technical Advisor. Tel: 087 – 911 3331.

Contact: TIDL Thermal Covers Division. Tel: 01 – 882 9990 (Dublin Office); Tel: 021 – 496 6102 (Cork Office). email: sales@tidl.ie

The TIDL Thermal Covers team.

Benefits of thermal covers

- Energy savings with rapid pay-back
- Personnel protection from heat fatigue/skin burn;
- Easy to fit and remove for maintenance;
- Completely reusable;
- Drawstrings for effective end closure;
- Water repellent;
- Protection against frost damage.

Further to the ErP (Energy related Product) Directive coming into force in September, Panasonic has developed the Energy Label Generator, an easy-to-use online tool to help installers comply with these new regulations. The Directive requires manufacturers to label individual products, and installers to label multi-technology systems. Panasonic's new A2W ErP Tool enables users to print out the relevant labels and supporting data-sheets for Panasonic equipment.

Be 'ErP-ready' with Panasonic A++ heat pumps

All residential and commercial heating products must now carry the European ErP energy efficiency labels, intended to assist consumers in their purchasing decisions, to help reduce private energy demand and combat climate change. These labels will mark the grade of efficiency of each individual product. This label must be visible on all display merchandise.

Heat pumps will be classified into nine efficiency categories, the highest being A++ to the significantly lower value appliances marked "Category G".

For heat pumps providing heating at 55°C, they must be labelled as A, A+ or A++, with a minimum efficiency of 100%. For low-temperature heat pumps, these systems must be working at an efficiency rate of 115% within the A+ or A++ category.

Panasonic's full range of heat pumps achieves A++ rating when operating at 55°C*. This is the highest rating that can be attained, highlighting that Panasonic solutions are as energy efficient as possible.

The ErP Directive not only requires manufacturers to label individual new products, but installers must also provide a datasheet and energy efficiency label for each product in the quotation for the client. If an installer is working with a multi-technology system, the Directive not only requires labelling of individual components such as the boiler, controls and heat pump, but it will also be compulsory to label the system as a whole, based on a total energy efficiency calculation.

To make it easy for installers to calculate a multi-system's energy efficiency and to obtain the appropriate ErP label, Panasonic's new online tool automatically produces the system label once the installer has gone online and input the Panasonic product codes and data from other suppliers' product fiche of the equipment being installed.

Panasonic will supply the energy label and data sheets for all its products affected by these regulations, which must be used when labelling its products. Official labelling commenced on 26 September but a transitional period of six months has been granted.

For more information or to use Panasonic's Energy Label Generator, visit www.panasonicproclub.com or to find out more about its range of heating and cooling products, visit www.aircon.panasonic.eu.

Contact: Vincent Mahony, Panasonic Ireland. Tel: 087 – 969 4221; email: vincent.mahony@eu.panasonic.com

** The indications are based on the official ErP Regulations (EU Regulations N° 811/2013, EN 14511 and EN 14825) for heat pumps, which is officially binding from September 2015. Panasonic's new Aquarea H-Generation will meet the regulations and achieve a rating of A+++ by September 2019.*

Panasonic's full range of heat pumps achieves A++ rating when operating at 55°C*.

CO_2 Unique Efficiency

Q-ton is an air-to-water heat pump which uses CO_2 gas as a natural refrigerant and delivers industry leading coefficient performance of 4.3* with a **minimal carbon footprint**.

Q-ton is ideal for heating water up to temperatures of **90°C**, which is suitable for a wide range of applications. With a Global Warming Potential **(GWP) of 1** & Ozone Depletion Potential **(ODP) of 0**, Q-ton is already future proven.

High Performance

High Efficiency

Environmentally Responsible

Easy Operation

Long-term Reliability

DIAMOND AIR CONDITIONING, LTD.

Diamond Air Conditioning Ltd,
C5 Bymac Centre, Northwest Business Park,
Blanchardstown, Dublin 15. Tel: 01 – 636 3131;
email: info@diamondair.ie;
www.diamondair.ie

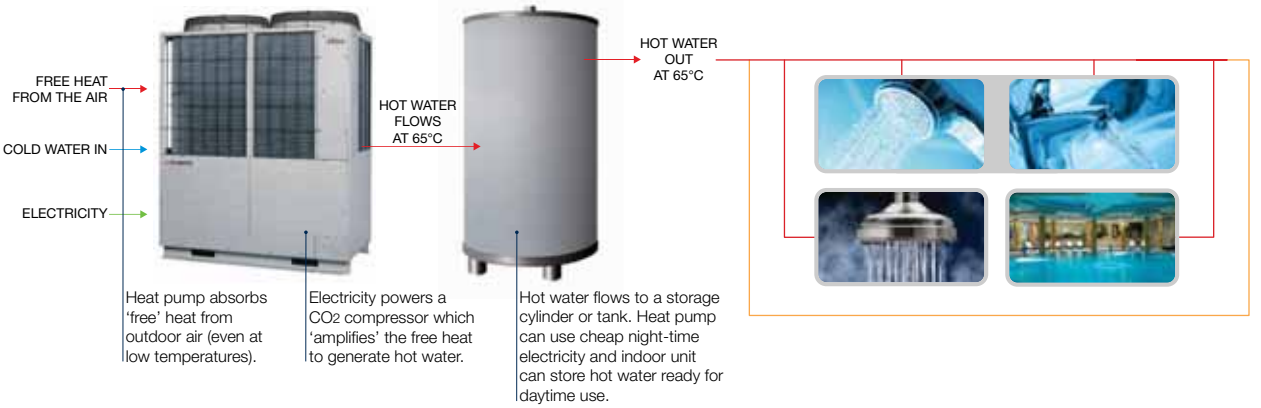
Introduction

Carbon dioxide (CO_2) hot water heat pumps are relatively new on the market and have the ability to deliver sanitary hot water at 65-90°C very efficiently. They can offer significant carbon and energy savings potential compared with hot water boilers.

Q-ton is specifically designed to transfer heat from the ambient air into a water heating system. The refrigeration system uses carbon dioxide as the working fluid. It can be used to provide sanitary hot water in a wide range of buildings.

How it works

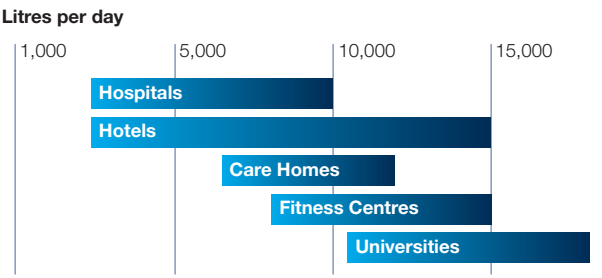
- Systems can be specified from one 30kW Q-ton unit giving 6,000 litres of hot water/day, to up to sixteen heat pump units in a modular configuration of 480kW, connected to substantial hot water storage tanks.
- Touch screen controller makes the system easy to operate.
- Hot water production and availability can be monitored via a user-friendly graphic display.



Who it's for

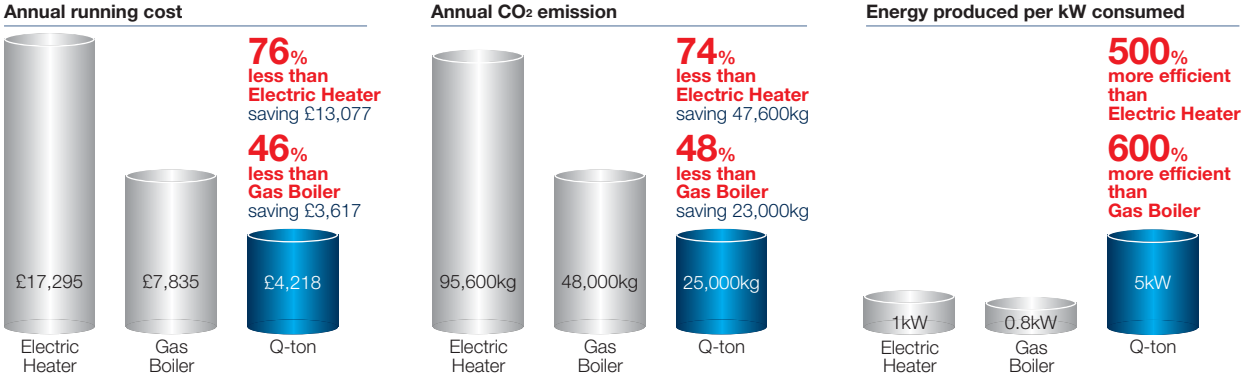
Q-ton is suitable for any applications using sanitary hot water in excess of 5,000L per day. Typical applications:

- Hospitals
- Hotels
- Care Homes
- Fitness Centres
- Universities
- Restaurants
- Laundries
- Food Industries
- Camping Sites etc.



The benefits

- Substantial reductions in running cost (40-75%)
- Substantial reductions in CO_2 emissions (45-75%)
- Suitable for new build and retrofit
- No need for heating back up
- CoP of 5 (produces 5kW of energy for every 1kW of electricity)

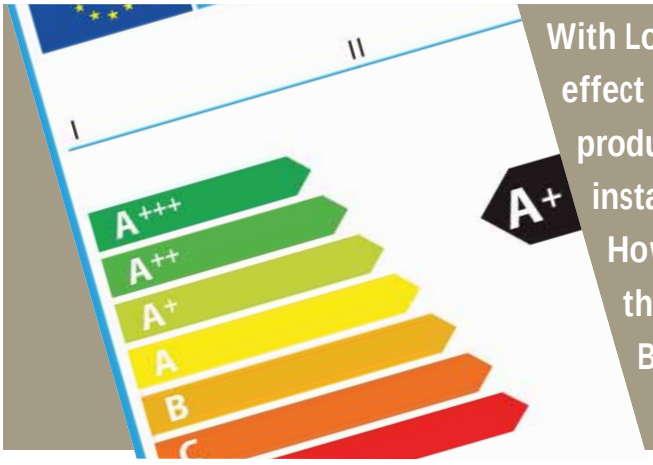


Operation conditions: senior care home, 80 persons, 8,000L/day, 60°C conversion

Q-ton Air to Water

MITSUBISHI HEAVY INDUSTRIES, LTD.

Our Technologies, Your Tomorrow



With Lot 1 and Lot 2 of the ErP Directive coming into effect on 26 September 2015, suppliers of heating products – and more especially heating system installers – are now subject to new obligations. However, before going on to explain what these are, *Vincent Broderick*, Sales Director Baxi Potterton Myson, gives a brief background to ErP and what it means.

ErP imposes 'fiche' obligation on installers

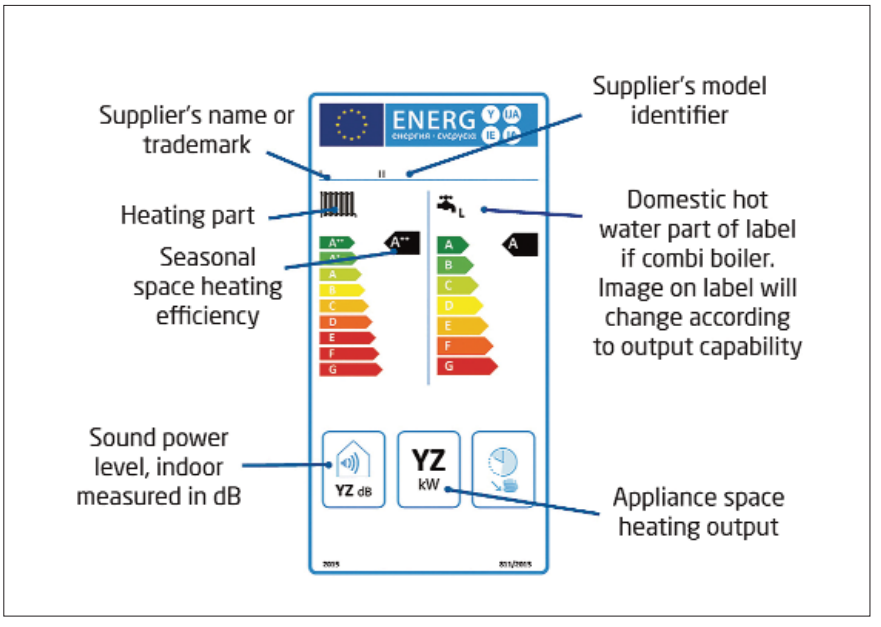
The introduction of the Energy Related Products Directive (ErP) impacts on all energy-related products sold within the EU. Any product that consumes energy, with the exception of methods of transport, has to meet a certain set of minimum requirements. The objective of these requirements is to significantly reduce greenhouse gas emissions and any other adverse environmental effects of these products.

Product groups have been split into a series of lots with Lot 1 covering heat-producing appliances such as boilers and heat pumps with an output up to 400kW, and Lot 2 covering water heaters and hot water storage tanks up to 400kW output or 2000 litres. These products are now subject to minimum efficiency and emissions criteria. For heat pumps, noise limits will also be assessed. Manufacturers whose products don't meet the requirements will be unable to sell those products in the EU.

All installations of boilers and water heaters in new and existing buildings are affected by the Directive. As older products don't currently meet the new efficiency or emissions limits, many will need to be replaced. This will affect all non-condensing boilers up to 400kW, including atmospheric, pressure jet and pre-mix boilers.

There are actually two directives within the ErP. The first, Ecodesign, sets the minimum energy performance and environment criteria for energy-related products. The second, Energy Labelling, says that every product below 70kW will be classified with an efficiency band G to A+++, and the classification detailed on the energy label stuck to the product. Apart from the usual performance-related data, it is worth noting that the new-style label includes a sound factor outlining the boiler's operating level in decibels.

Virtually all manufacturers of heating appliances covered by Lot 1 and Lot 2 of the ErP Directive are now fully compliant in this respect.



What does ErP mean for the installer?

For many homeowners the first sight of the boiler will be during or after the installation date. This effectively means that they are going to be guided by the installer when making a decision as to what boiler to choose. Moreover, while the label includes information on output and relating to noise levels, they will depend on the installer to explain precisely what the information means. Consequently, it is up to installers to help homeowners understand the relevance of ErP.

ErP is also significant for installers in that they are now responsible for certain elements of the Directive when installing a new appliance. This includes calculating the efficiency of the installed system, providing an energy label for the product and completing the fiche document.

This document will provide the installer with an efficiency figure for the entire heating system, inclusive of the boiler and heating controls. On the first and positive side installers will have an additional tool at their disposal to help up-sell other controls, as homeowners look to become more energy efficient.

However, on the downside, installers now have to complete this new form using an online database. This, no doubt, will require a further learning curve for many.

Just what is a fiche?

The fiche is a new document installers are required to fill out when they complete an installation, whether for a simple boiler replacement or a whole new heating system. It is seen as a supporting document to the energy label.

There is no standard format for a fiche but it must provide certain information relating to the performance and efficiency of the products installed. Suppliers are required to provide a fiche at the point of sale, usually in or with the product brochure or any other literature in the box, and installers are required to provide a fiche to the consumer that records the efficiency of the whole heating system.

While each product will be supplied with a completed fiche at the point of sale, heating installations usually consist of more than one appliance. This means that the installer will need to work out the combined efficiency of the products installed within the total system and then provide this new fiche to the consumer.

Each product performs differently, even if they are from the same range. For example, a heating system made up of a Baxi EcoBlue 24kW and a Nest Learning Thermostat will perform slightly differently to a Baxi EcoBlue 28kW with a Nest Learning Thermostat. This also applies when installing water cylinders and/or solar panels as part of a larger system.

However, most manufacturers have created an ErP calculation tool to help installers work out a system's efficiency. After in-putting the products that have been installed, the ErP calculation tool will work out the combined efficiency rating and provide installers with a completed, printable fiche.

While the implementation of Lot 1 and Lot 2 of the ErP Directive undoubtedly places an additional burden on manufacturers and installers, it will lead to a more orderly, transparent marketplace where consumers can better evaluate the benefits of quality products and systems. This has to be good news for all *bona fide* manufacturers and installers. ■

Who is responsible for what?

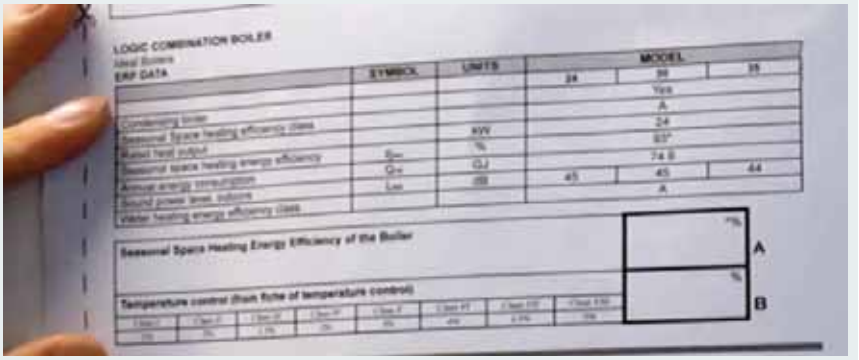
Both manufacturers and installers have obligations under the ErP Directive to ensure compliance with the regulations. Essentially, under Lot 1 and Lot 2 relating to heating products and introduced on 26 September last, these are as follows:

Manufacturer

- To provide the energy label for products.

Installer

- To calculate the system's efficiency;
- To provide the energy label for the system;
- To complete the fiche to provide the efficiency figure for the complete heating system.



Airbloc appoints Diamond Air

Airbloc, the commercial air curtain technology specialist, has appointed Diamond Air Conditioning its distributor for Ireland. Diamond is already an established market leader in the air movement and indoor climate control sector and the addition of the Airbloc range is the perfect complement to the existing portfolio.

Retail premises, offices, restaurants, warehouses, factories and cold rooms are all subject to the problems associated with frequently-opened doors. They not only cause discomfort but, because of the significant energy loss, greatly increase the running costs of a building. Using an Airbloc solution devised and installed by Diamond Air makes for a cost-effective and energy-efficient solution that can reduce heat loss by as much as 80%, and of course lead to corresponding energy cost savings.

Airbloc is the well-established brand of Nortek Global HVAC who has been developing and manufacturing innovative and quality-driven commercial HVAC solutions for many years.

The current Airbloc range comprises ambient unheated models or heated models using gas, electricity, hot water or steam. In well-insulated structures, Airbloc provides the final complement to the low energy concept by eliminating a major source of heatloss.

Airbloc units are a simple and versatile solution supplied in a compact modular format for simplified on-site handling. Units are designed for doors up to six metres high. For industrial applications where over-door installation is not practical, the units may be vertically mounted at one or both sides of the door. Remote control panels are provided with each air curtain to reduce on-site wiring.

Although the three Airbloc ranges cover most standard applications, Airbloc air curtains can be custom designed to meet particular requirements. These may include special sizing for integration within ceiling systems or bulkheads, vertical mounting, or units with specific airflow performance.

An Airbloc installation at a flagship McDonalds outlet.

Typical Airbloc over-door solution in a shopping mall store.

Chris Jones, Airbloc Product Manager at Nortek Global HVAC says: "We are very excited to have teamed up with a reputable company such as Diamond Air Conditioning and are confident that they will grow and strengthen our market penetration throughout the HVAC and broader building services sector in Ireland".

"Airbloc is the perfect addition to our existing product line-up", says Diamond Air Director Graham McCann. "It makes for genuine solutions that are innovative, high-performing and energy efficient, something we strive to deliver on every project. These objectives are shared by Airbloc and our new partnership will result in an even stronger service offering to our existing and new customers".

Contact: Michael Clancy (087 – 262 0701); Graham McCann (087 – 950 9402); Diamond Air Conditioning.
Tel: 01 – 636 3131;
email: info@diamondair.ie;
www. diamondair.ie ■

All glistens at Euro Gas Pearl celebrations!

Congratulations to Euro Gas who this year celebrate 30 years in business. In marking their Pearl Anniversay, Martin, Jimmy, Des, Denis and the team recently hosted a wonderful celebratory evening on board the *MV Cill Airne* which is moored on the North Wall Quay in Dublin. The very large turnout reflected the high standing Euro Gas enjoys in the building services sector, while the party atmosphere was indicative of the upbeat and positive mood Euro Gas personnel bring to doing business.
Congratulations to all at Euro Gas.

Hitachi conditions 'Space'

Hitachi Ireland, working closely with locally-based air conditioning contractor Crystal Air Services, has just completed a major VRF, heat pump and heat recovery installation at SERC in Northern Ireland

The Space is the new flagship performing arts, music, computing and engineering facility at the South Eastern Regional College (SERC) in Bangor, Co Down. The €16.5 million, 3,650sqm project comprises a professional theatre, dance studio, drama studio, conference hall, professional recording studios, industry-standard computing laboratories and incubation facilities.

The different building types, varying occupancy patterns and diverse usage called for a very complex, yet simple-to-operate, indoor environment management system. However, working closely with project consultants Bennett Robertson Design and mechanical contractor Harvey Group, Hitachi and Crystal Air Services came up with the perfect solution.

Essentially, the system comprises six Hitachi Set-Free high-efficiency VRF systems; two 32kw Yutaki air/water heat pumps for the underfloor heating in the ground-floor, open-plan, areas; Hitachi heat recovery ventillation units (KPI total heat recovery units); and Hitachi's CS NET WEB centralised web-based controller.

The unique features of the solution devised included key benefits such as:

- Low height, low noise indoors for recording studios;
- Off-coil control on cooling mode (limited from 12-16°C);
- Fan-off on thermo-off condition (when set point is reached on heating mode the indoor fan goes to off to eliminate cold draughts associated with air recirculation);
- Modular design that allows independent defrosting of outdoors (continuous heating);
- CS Net Web with touch-screen and building layout.

Hitachi's Set Free Variable Refrigerant Flow (VRF) systems are an extremely powerful cooling solution for all kinds of applications. They comprise outdoor and indoor units, and control systems, designed to save on energy usage while being reliable, flexible and easy-to-install.

Hitachi's heat recovery ventilation systems adjust the temperature and humidity of incoming fresh air to match the indoor environment. Benefits include airflows from 250m³/h to 2,000m³/h; ErP Lot 11-compliant motors; highly-efficient heat exchanger with automatic ventilation; energy exchange during summer months that reduces cooling load by up to 20%; easy access hatches for simple in-situ maintenance.

Hitachi's Yutaki S air-to-water heat pumps can be used for new installations, to replace a conventional heating system entirely, or alongside an existing heating solution. It heats reliably in ambient temperatures up to -20°C and can also regulate room temperature in summer. Monovalent heating is possible up to 60°C.

Meanwhile, CS NET WEB is a centralised independent control device for simultaneous adjustment of up to 160 indoor units and 64 outdoor units connected to the communication bus H-LINK.

Control expansion allows up to 640 indoor units to be connected and connection of four CS NET WEB units.

For full information on Hitachi's unique off-coil temperature control (cold draft prevention) contact: Fergus Daly, Area Sales Manager, Hitachi Ireland. Tel: 01 – 216 4406; Mobile: 087 – 277 9505; email: fergus.daly@hitachi-eu.com ■

Below: Martin O'Brien, Hitachi Ireland and Mark Mawhinney, Crystal Air Services commissioning the two RAS 10HRNME-AF air/water heat pump condensing units serving the two RWM 10 indoor modules.

Above: The two RWM 10HFSN3E 32kw air/water heat pump indoor modules at The Space.

Main Pic: The six FSXNH high-efficiency Hitachi Set Free VRF condensing units.

The art of smoke extraction by Flakt Woods

Smoke shafts are essentially a simple ventilation system designed to extract any smoke leaking into a common lobby to protect the escape stairs. Typically, a vertical builder's work duct rising through the building would be used to extract smoke from the lobbies and each lobby would have a damper connected to the builder's work duct, writes *Gavin Power, Flakt Woods*.

For natural shafts, the head of the shaft is terminated with an automatic opening ventilator. Mechanical shafts use extract fans, mounted on the roof and connected to the builder's work duct with sheet metal ducting. An automatic opening ventilator is mounted at the top of the stairwell and the complete system would be controlled by an addressable control system that provides automatic operation of the ventilation by interface with the fire alarm system or smoke detectors.

Computational Fluid Dynamics (CFD) are often used to ascertain the volume flow rate required to maintain the design conditions within the lobby. This was essential in the early days of adoption of such systems as each situation was, in effect, a new scenario.

However, after more than five years of common usage, there is a bank of data available to inform such selection for most buildings, particularly residential where one lobby is very similar to another. Fläkt Woods now has data from dozens of models and has aggregated this into a matrix to develop suggested extract rates for buildings within the parameters of BS 7974.

Against this background Flakt Woods designs bespoke solutions for each individual project, carefully selecting the necessary components and combining them to deliver the perfect solution. The key elements of these solutions include:

Stairwell ventilator

The ventilator above the stairwell will primarily be used as an air inlet for the smokeshaft and should have a minimum free area of 1.0 sq m. It should also comply with EN12101-02;

Smoke exhaust plant

For mechanical shafts, extract fans should comply with EN12101-03 and a standby fan is required in case of fan failure. The selection of the appropriate temperature rating should be dictated by the results of any design calculations or CFD modeling. However, based on previous project data, a rating of 300ºC for 1-hour will be suitable for most residential situations. Ventilators at the head of natural shafts should be to the same standard as stairwell ventilators, complying with EN12101-02.

Clockwise from top left: stairweell ventilator, lobby ventilator, control system, smoke exhaust plant.

Lobby ventilators

The ventilator connecting the lobby to the builder's work shaft may be a door type or a damper. The basic requirements are for it to open on the fire floor to exhaust smoke and for the remaining floors to remain closed, preventing smoke spread and maintaining fire compartmentalisation.

There is no specific standard for these products so the two common approaches are to use an E30Sa fire door (with an electrical actuator) or a smoke damper, neither of which will be fully certified for the application but which offer pragmatic solutions. The actuators should be "drive open", "drive closed" rather than a spring-return type.

Control system

The control system should comply with EN12101-09 where applicable, and sensitive equipment such as inverters and PLCs should be located out of the fire zone. It may be designed specifically for the building, or be a modular standardised product that can be configured to the building.

Most residential applications will suit the modular approach, with local zone control panels located throughout the building communicating with a central processor, usually located at the fan position, and a HMI panel at a convenient location that is used for commissioning and testing.

Triggering of the system may be from dedicated smoke detectors purely for the operation of the smoke control system, or through interface with a building smoke detection system compliant with BS5839 part 1, L5 classification.

Contact: Gavin Power, Flaktwoods. Dublin: Tel. 01 - 463 4600; Cork: Tel: 021 - 429 7450; Belfast: Tel. 028 - 9040 2100. www.flaktwoods.com

10 out of 10 for the Grundfos Ecademy

How we acquire knowledge has dramatically changed over recent years and it is important that companies like Grundfos offer a range of accessible platforms and learning styles to facilitate and reflect the busy lives people have today.

With this in mind the Grundfos has developed the Ecademy – a free digital training tool and information platform. Here is a quick guide to what the Ecademy is and what it can offer.

What is the Grundfos Ecademy?
It is an internet-based learning tool designed to improve knowledge on pumps, applications and their theory.

What is its purpose?
The Grundfos Ecademy is a digital training and information platform that is available 24/7. Its aim is to help keep pump professionals up-to-date on a range of industry-related topics.

Who is the target audience?
Currently it is aimed at installers, heating engineers and merchant counter staff. However, there are plans to expand this into other business areas over the course of the next 12/18 months.

What topics are currently available?
At the moment there are seven topics available:

- The basic principles and pump types;
- Circulator basics and control modes;
- Grundfos AUTOADAPT;
- Grundfos ALPHA2;
- Grundfos UPS2;
- Grundfos SOLOLIFT2;
- Hot water recirculation and the Grundfos Comfort.

Will there be more topics available?
New topics are already in the planning and will be added to the Ecademy on a regular basis. Check the website regularly for all the latest news

How are the various topics presented?
Each topic is broken down into small bite-sized tasks that will only take 5/10 minutes of user's time. The content is kept interesting by presenting it in a number of ways, including via training videos, downloadable presentations and in-depth articles, training and information.

Besides learning more about pumps and pump theory, are there other benefits to joining the Ecademy?
As professionals, people want to deliver the ideal system for their customers. This means being able to trouble-shoot and advise customers about the best replacement.

Is there any reward for the successful completion of modules?
When users have completed each topic there are a few questions to answer. These are designed to help consolidate the content. When users have successfully completed four topics they will be given the opportunity to select an item from the list of available rewards.

How do I access the Ecademy?
The Ecademy can be easily accessed from smartphones, tablets or computers.

Where can I sign up?
You can register for the Grundfos Ecademy by visiting www.grundfos.ie/ecademy.
The good news is that once you are signed up, you will be able to use your log-in to access not just the Ecademy, but also other Grundfos web platforms. ■

Condair Humidifies print works

A Condair ML Solo high pressure humidification system has been installed in the litho platemaking area at Polestar print company's award-winning plant in Sheffield. Designed to suppress and disperse electrostatic charges when protective film is removed from the plates, Condair's low-energy humidifier maintains a relative humidity of 45% in the area.

With a strong focus on printing excellence and productivity at Polestar, the new humidifier installation provides an effective solution to the problem of electrostatic charge generation when protective paper is removed from the litho plates. By reducing and dissipating the electrostatic charge, the paper and plates are easier to handle, it prevents the attraction of dust and reduces the risk of spark generation.

The Condair ML humidifier delivers ultrafine sprays directly into the air, which rapidly evaporate to maintain a relative humidity of 45%RH, the level required to counter the effects of static electricity.

The Condair ML Solo is a low energy, cold water spray humidifier, requiring just 5% of the energy used by equivalent steam humidifiers. This fits well with Polestar's strong environmental credentials, which seek to minimise its impact on the environment through initiatives such as recycling and wastewater management.

Ten spray heads are located in the platemaking area, with a capacity to deliver up to 48 litres of pure, demineralised water into the air each hour. Effective moisture distribution is ensured from the twin jets on each ML Solo unit by a low energy, low-noise fan. Operating in complete safety at 70bar, the jets are fed with mineral-free water produced centrally by a Condair MLPRO100 pump and reverse osmosis treatment station. The system features a stainless steel, oil-free, high-pressure pump, RO water purification and UV water sterilisation, so low maintenance and pure, hygienic sprays are guaranteed.

Work at the Polestar Sheffield plant also included the installation of two chillers, inverter-controlled chilled water pumps, pumping stations, tanks and over 3km of stainless steel pipework, with Condair undertaking the installation of the humidification system.

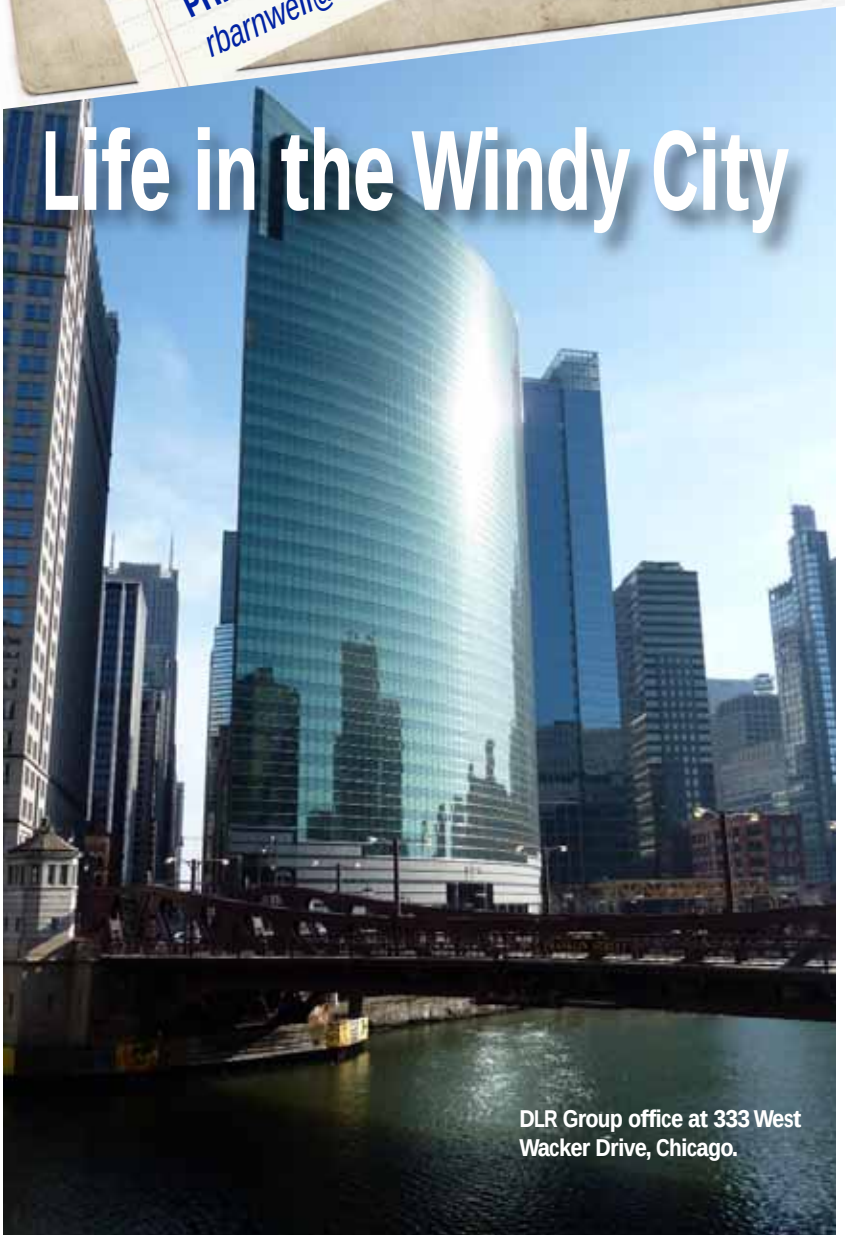
Condair's ML Solo humidifier is widely used in the printing industry around the world, particularly in paper storage, press halls and print finishing. An environment of 45-55%RH effectively deals with problems caused by dry air such as tight edges, paper curl, misfeed and web breaks, and effectively disperses static and dust.

In an industry where temperatures can get high, the cold water humidifier also offers the benefit of free cooling – up to 33kW from a system like the one at Polestar. It is also widely used for humidification and evaporative cooling in many other industrial applications such as woodworking and textiles, commercially in horticulture, in applications such as supermarkets to maintain the quality of fresh vegetables, and in offices.

The spray head operation is virtually silent, introduces no dust to the atmosphere, is hygienic and requires only infrequent and straightforward maintenance. With a choice of colours, jet configuration and outputs, with adjustable brackets for directional orientation, they can be ceiling- or wall-mounted and suit many situations.

Contact: Pat Byrne, Condair Ireland Sales Manager. Tel: 091 – 507 120; email: pat.byrne@condair.com; www.condair

Life in the Windy City


DLR Group office at 333 West Wacker Drive, Chicago.

I graduated from DIT Bolton St with a degree in building services engineering in 1999, having spent a few summers along the way in Chicago on J-1 visas and where I made lots of life-long friends. On graduation I worked for a short time in a factory in my hometown of Tullamore but, when an opportunity arose to obtain a working visa in the United States, I decided to head back to Chicago and "the land of opportunity".

The Irish built Chicago and made it what it is today ... the heart and soul of the Midwest and economic fulcrum of the nation. The Irish have always had a prominent role in the development of Chicago as a world-class city, from the Irish workers who dug the ditches in 1900 to reverse the flow of the Chicago river, to the first Mayor Daley who ran the city for 21 years from 1955 to 1976; the second Mayor Daley (his son) who ran the city for 22 years from 1989 to 2011; and the current crop of Irish-born professionals who lead today's real estate, financial, construction, energy and legal industries.

Chicago is a work-hard/play-hard city. The work-hard part is a given in a city built on blue-collar Midwestern (and Irish) values — you work hard or you don't survive. The play-hard part applies to having fun after work and on the weekends with friends and, later on in life, with family. I have three young daughters so these days I play harder than ever, just in a different setting.

After a few months working at a local bar on the north side of the city called Sheffield's in 1999, I had my first interview with a firm called Henneman Raufeisen, a well-respected mid-sized Midwest engineering firm. My interview with company principal Al Raufeisen was a few hours long and we chatted about everything from Formula 1 racing to engineering formulas. I spent 10 great years at Henneman Raufeisen. It was a great introduction to the HVAC design industry and Al turned out to be a mentor that heavily influenced my professional career.

I had the perfect head start thanks to the great education I received at DIT Bolton St.

The building services engineering course is a fantastic foundation to build on. Coming straight out of college and being able to lay out piping and ductwork systems, and size major pieces of HVAC equipment like boilers, chillers, pumps, towers etc, gives you all the tools you need to hit the ground running. Engineering graduates in the US typically have a much broader curriculum, so having this skill-set from college is a definite advantage. In my current role I still try hard to hire DIT Bolton St graduates because I know how well educated they are in the building services industry. Just last year we had four DIT Bolton St graduates in the same office.

When I started out in the industry I was surprised at the attitude towards sustainable and high-performance building design. The industry in the US leaned heavily on rules of thumb and safety factors when sizing equipment, and very little priority was given to building simulation or creating energy models. Things started to evolve around 2002 when the US Green Building Council's Leadership in Energy and Environmental Design (LEED) building rating system began to get a foothold in the design and construction industry, and terms like "energy modeling" and "commissioning" became commonplace.

The US had a lot of catching up to do with European high-performance building codes and standards, but it managed to close the gap relatively quickly over the following few years, culminating in LEED being the most recognised green building rating system on the planet, and a major driver for market transformation in the United States.

In 2009 I got an opportunity to be part of a start-up company called Building Momentum Group (BMG) that focused exclusively on the performance of the built environment, with core service offerings of energy modeling, high-performance building design consulting, commissioning and energy assessments.

Chicago is the only city in the US to dye its river green for St Patrick's Day.

"St Patrick's Breakfast Chicago" – fellow DIT Bolton St building services graduates and DLR Group employees (l to r) Patrick O'Sullivan, Shona O'Dea and Ruairi Barnwell with Chicago Mayor Rahm Emanuel.

The construction industry was in a lull because of the recession, but it turned out to be a great time to start something with a fresh and new perspective, shaking things up and challenging the industry's conventional thinking. At that time in 2009 most firms were still in survival mode or emerging from the recession and battening down the hatches to ride through the economic storm. We had the luxury of having venture capital behind us from a large manufacturing firm that wanted to diversify into a consulting service model. We quickly grew our group from two to 10 in a "down economy".

The work environment at a start-up firm is a fantastic experience and one that I highly recommend everyone try at some point in their career. It is a lean, fast-paced, high-pressure, fun, dog-eat-dog world that refocuses priorities but can be hugely fulfilling. As a dynamic and nimble enterprise that could quickly change tack, re-navigate and refocus if needed multiple times over while the big boys were still trying to turn their ship, it was a fun way to challenge market norms and industry standards.

However, as the construction market rebounded, our venture capital was re-allocated to one of our parent company's core sectors, and just like that our start-up firm dissolved ... but that's how it goes and in the words of Liam Gallagher, "you gotta roll with it".

Chicago is the epicentre for architectural design firms and at our start-up firm we had worked with most of the bigger firms in town (who also work nationally and globally). This gave us a pretty good insight into the workings of the biggest and best in the

industry. What we quickly found was that the marketing rhetoric doesn't always live up to the actual inner workings of a design firm, and once you look behind the curtain things aren't necessarily as rosy as they appear in the glossy brochures.

One firm that we really had pegged as guys who "get it" was DLR Group. As one of the initial signatories to the Architecture 2030 challenge (which is a commitment to design carbon-neutral buildings by 2030), DLR Group actually walked the marketing talk. So, when the opportunity arose to take the core team from our start-up but now dissolved firm over to start a high-performance building design group at DLR Group, we jumped at it.

DLR Group is an integrated architecture and engineering design firm, with over 700 employees spread around 22 offices in the US and China. I've been lucky enough to visit a lot of these offices, including a trip to our Hawaii office in 2013. In 2012, *Architect* magazine, the official publication of the American Institute of Architects in the US, ranked DLR Group as the No: 1 design firm in the country.

One of the first projects I worked on at DLR Group was Chicago's first LEED Platinum Fire Station, Engine Company 16, which became the blueprint and prototype for all future fire stations in the City of Chicago. Coming from a family where my father was a Fire Chief, being part of this project was a very proud achievement for me personally.

Chicago's first LEED Platinum Fire Station, Engine Company 16.

At DLR Group I was given the support to build a "best-in-class" team of engineers that were focused and passionate about integrated design and the optimisation of holistic building performance. Today I lead a group of engineers out of our Chicago office that supports our integrated design practice regionally and nationally, and also sticks to that same start-up principles of being nimble, dynamic and adaptable to change in a rapidly-evolving energy, sustainability and design industry.

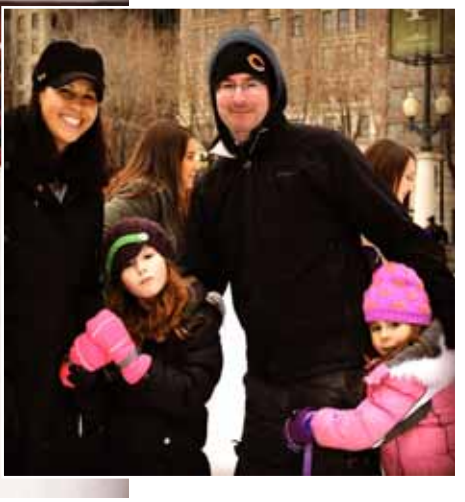
Chicago has everything a young professional could ask for. The cost of living is average, rent can be high in the trendier areas, just like any city, but there's always a food or drink special to be taken advantage of at the many bars and restaurants across the city.

On any given day there are at least two direct flights that leave Chicago for Dublin, so Ireland is only seven hours away and it's possible to do a quick weekend home. I've done it for some of the important Irish soccer qualifying matches and World Cup play-offs.

There is a great Irish network in Chicago today and a "can-do" attitude that is infectious. Nobody will ever say no to making an introduction or doing you a favour. New York gets a lot of the spotlight, and the West coast has the glamour, but if you are ambitious there are few spots in the country with more potential for growth than Chicago.

One big cultural difference to Ireland is that people in Chicago don't sit in all week waiting for the weekend. If it's nice on a Tuesday evening then it's time to have an impromptu BBQ or get out for a quick sail on Lake Michigan or to catch a Cubs game at the legendary Wrigley Field. Even when Saturday does roll around, you are more likely to be tailgating at a sporting event, enjoying the outdoors camping, playing on one of the many GAA teams in Chicago or bike riding on the lakefront than being in a nightclub at 2am looking for last orders.

The winters are tough but that makes every hour of the Spring, Summer and Fall (Autumn) even more precious and forces you into a mantra of living every hour of the day to the maximum, Chicago style! ■



Chicago winters are cold but still fun – daughters Catelin, Maeve and Bella enjoying the snow. Inset: Ruairi with his wife Andrea and daughters Bella and Catelin take a break while ice skating at Millennium Park, Chicago

PM Group, the international project delivery specialists headquartered in Ireland, has reported operating profit of €8.97 million for the year ended 31 December 2014.

PM Group reports 24% profit increase

This €8.97 million is an improvement of 24% on the previous year and results from improved trading activity across all business locations.

Turnover in the year was €349.5 million, broadly in line with 2013. Pre-tax profits recorded a decrease of 8% to €8.88 million, reflecting once-off exceptional gains in 2013. Net assets at 31 December 2014 were €49 million.

Commenting on the results, Chief Executive Officer, Dave Murphy said: "We've seen solid revenue growth in key sectors which has driven profitability right across the Group. Almost 60% of our business is now generated outside of Ireland. We booked €135 million in new work orders in 2014 and have had a strong first half year in 2015 on the back of the high level of booked work coming into the year.

"The Irish market performed strongly in 2014 with revenue well ahead of 2013, and the UK has also been a significant contributor to our overall profit growth. We benefitted from large-scale FDI into Ireland by the global pharmaceutical industry in 2014, in particular by new entrants, and have been able to capitalise on our specialist pharmaceutical expertise in delivering high-tech projects in a number of locations. We remain positive about future growth opportunities across our sectors.

PM Group Chairman Dan Flinter with Chief Executive Officer Dave Murphy and Chief Financial Officer Larry Westman.

"As a direct result of the relaxing of dairy quotas, we also delivered several new infant nutritional projects across Europe, including Ireland, the UK, Holland and Germany. The global expansion of the data centre industry continues to be an area of strong growth and we see further new opportunities with our key clients in this sector."

PM Group Chairman, Dan Flinter said: "The PM Group Board is very pleased with the results for 2014 and the strength of our project pipeline has enabled us to attract great talent, particularly in the area of design and construction. We need to ensure that talent is developed and nurtured, particularly in Ireland, as the global recovery strengthens and the battle for talent intensifies. This will drive continued investment in people and systems as we look to strengthen our 2,100 strong team over the course of 2015."

PM Group operates across Europe, the USA and Asia with a 43-year track record in project management, process design, facility design and construction management for leading multinational companies. ■

Putting HYL on Kilimanjaro

another side of …

David Humphries

David Humphries of Haughton & Young is a committed hiker, spending virtually every weekend treking up some mountain or other. However, his most recent adventure was something special and involved scaling the peak of Mount Kilimanjaro.

When he first started hiking his goal was to reach the top of the highest mountain in each province in Ireland. Having done that twice, this year he set his sights further afield. He chose Kilimanjaro which, at 5895mts, is the world's highest free-standing mountain.

He booked the trip with a company called Pat Falvey Irish Worldwide Adventures, which is based in Kerry and run by full time adventurer Pat Falvey.

There were 15 on the trip covering all ages, including an 80-year old man, Kevin Gormley, who was climbing with his two sons to mark his 80th birthday. He was an inspiration to everybody, complaining least and setting the pace for the entire group. In fact, he became the oldest Irish person to reach the summit of Kilimanjaro.

The party flew out from Dublin to Tanzania from where they began their trek using the Machame Route where the usual schedule involves five days to the summit and two to descend.

The early pace was surprisingly slow. The locals catchphrase was "poley poley", which means slowly slowly. It would later become very obvious that acclimatisation was the key to reaching the top.

On the third day David began to experience a degree of mild altitude sickness. It's something that you can't really legislate for in advance but when it hits it's not very pleasant. A thundering headache and exhaustion are the leading symptoms. Again acclimatisation is the key and thankfully, the next day, he was over it.

The party made good progress over the next few days, stopping at camps every evening which were set up by the porters who went ahead each morning to prepare for their arrival and overnight stop.

As they progressed they encountered different climatic zones which were reflected by the plant growth – the coffee and banana plantations; a beautiful tropical rain forest; a spectacular moorland/alpine meadow; an amazing lunar landscape; and finally, the depleting glaziers of a summit ice field on Summit Night.

The Summit Night (day five) was really what the trip was about. It was visible from day two onwards and looking up at it from early on it looked insurmountable. The summit attempt began at 11pm the night before and the plan was to arrive at the summit for sunrise at 6am.

As it happened they arrived at the summit of Kilimanjaro ("UHURU" – Peak of Freedom) at around 7am on 27 June. The sense of achievement was huge and thankfully everybody in the group got to the summit and back down again safely.

Based on the strength of this experience David plans to tackle the Himalayas next year. ■

David with fellow-group member Kieran Johnson atop Kilimanjaro with the HYL high-vis vest.

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